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No. 99-

IN THE

# Supreme Court of the United States

OCTOBER TERM, 1999

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COLUMBIA FALLS ALUMINUM CORP., ELF ATOCHEM NORTH AMERICA, INC., GOLDENDALE ALUMINUM CORP. (F/K/A COLUMBIA ALUMINUM CORP.), KAISER ALUMINUM & CHEMICAL CORP., NORTHWEST ALUMINUM CO., REYNOLDS METALS CO., VANALCO, INC.,

*Petitioners,*

*-- against --*

ADMINISTRATOR, BONNEVILLE POWER ADMINISTRATION,

*Respondent.*

## PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE NINTH CIRCUIT

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November 18, 1999

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## QUESTIONS PRESENTED FOR REVIEW

**1. May courts treat political intervention in Endangered Species Act decisionmaking as irrelevant, evaluating the resulting decisions on the basis of a fictitious and incomplete administrative record that does not disclose the intervention?**

**2. May courts treat disputes of scientific fact in Endangered Species Act litigation against federal agencies as beyond the scope of judicial review, allowing "scientific" agency findings to stand though refuted by empirical data?**

**3. May agencies reasonably construe § 7 of the Endangered Species Act to forbid federal action with *de minimis* or even positive effects upon listed "species" merely because the "species" is deemed unlikely to recover?**

**4. Can action agencies lawfully defer to biological opinions and recommendations for "reasonable and prudent alternative action" issued pursuant to the Endangered Species Act when they find those opinions and recommendations to be erroneous?**

## PARENT COMPANIES, SUBSIDIARIES AND AFFILIATES OF THE PETITIONERS

Petitioners Columbia Falls Aluminum Corp., Elf Atochem North America, Inc., Goldendale Aluminum Corp. (f/k/a Columbia Aluminum Corp.), Kaiser Aluminum & Chemical Corp., Northwest Aluminum Co., Reynolds Metals Co., and Vanalco, Inc. state that their parent companies, subsidiaries (except wholly-owned subsidiaries) and affiliates, if any include:

Maxxam, Inc.
Kaiser Aluminum Corp.
Kaiser Aluminum & Chemical Corp.
Societe Nationale Elf Aquitaine
Pechiney Reynolds Quebec, Inc.
Aluminerie De Becancour Inc.
Becancour Joint Venture
Eskimo Pie Corporation
Eskimo Europ, S.a.r.l.
Industrias Lacteas Del Yocoima, S.A.
New Eastwick Corporation
Boddington Housing Pty Ltd.
Worsley Alumina Pty Ltd.
Worsley Joint Venture
Boddington Gold Mines Mountgivson Joint Venture
Mt. Gibson Manager Pty Ltd.
Mineracao Rio Do Norte S.A.
Manicouagan Power Company
Reynolds-Lemmerz Industries
Aluminum-Oxide-Gemeinschaft Stade Aluminum Oxide Stage GMBH
HALCO (Mining) Inc.
Volta Aluminum Company Ltd.
Latas De Aluminio, S.A. – Latasa
Aluminio Reynolds Santo Domingo, S.A.
Procesamiento De Datos, S.A.
Union Industrial Y Astilleros Barranquilla "Unial" S.A.
Aleurope S.A.
Reynolds Aluminum France
Fata European Group S.r.l.
Industria Navarra Del Aluminio, S.A.
Industrias Del Lacado, S.A. (Indulacsa)
Industrias Gomariz, S.A. (Ingosa)
Alumino Reynolds Del Peru Sociedad Anonama
Reynolds Philippine Corp.

Aluminum Corporation of the Phillipines
C.V.G. Alumino Del Caroni, S.A.
Asociacion Venezolana De Adiestramiento Y Desarrolio Del Aluminio (Avadal)
Ruedas De. Aluminio C.A. "Rualca"
Venezolana De. Aleaciones, S.A. "Valsa"
Reymit Aluminum, S.A.
Albev Trading, Inc.
Aroaima Bauxite Company, Ltd.
Aroaima Mining Company, Ltd.
Egyptian Aluminium Products Co.
Iranian Aluminium Co.
Superenvases Envalic, C.A.
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## PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE EIGHTH CIRCUIT

Petitioners Goldendale Aluminum Company, Columbia Falls Aluminum Company, Elf Atochem North America, Inc., Kaiser Aluminum & Chemical Corporation, Northwest Aluminum Company, Reynolds Metals Company and Vanalco, Inc., respectfully pray that a writ of certiorari issue to review the judgment of the United States Court of Appeals for the Ninth Circuit entered on May 10, 1999.

The overarching issue presented in this case is whether mere invocation of the Endangered Species Act (or any other statute protecting an important public interest) excuses a federal agency from relying upon valid evidence and offering a reasonable explanation of how its decision comports with law. To the contrary, the more important the public interest being protected, the more important it is that the agency pursue that interest based on relevant facts, in a fashion that is not arbitrary, capricious and contrary to law.

### Opinions Below

The decision of the Ninth Circuit sought to be reviewed is reported at 175 F.3d 1156 (9th Cir. 1999), and is printed in the Appendix at pages 1a-12a (cited hereafter as "App. "). The unpublished order denying petitioners' motion to complete the administrative record is printed in the Appendix at pages 14a-15a.

The Record of Decision (ROD) of the Bonneville Power Administration (BPA) challenged through direct review in the Ninth Circuit is printed in the Appendix at pages 16a to 39a.

## Jurisdiction

BPA issued its ROD on March 10, 1995. On June 8, 1995, petitioners timely sought review in the Ninth Circuit, which had jurisdiction pursuant to 16 U.S.C. § 839f(e)(5).[1]

Petitioners appeal from a judgment of the Ninth Circuit entered on May 10, 1999, denying their petition for review of BPA's March 10, 1995 Record of Decision, and order of the Ninth Circuit denying rehearing, entered on August 20, 1999. Jurisdiction is conferred by 28 U.S.C. § 1254(1).

## Statutes and Regulations Involved

The statutory and regulatory provisions involved are § 7(a)-(b) of the Endangered Species Act, 16 U.S.C. §§ 1536(a)-(b), § 5 of the Flood Control Act of 1944, 16 U.S.C § 825s, § 2(b) of the Bonneville Project Act, 16 U.S.C. § 832a(b), § 2 of the Pacific Northwest Electric Power Planning and Conservation Act, § 16 USC § 839, and 50 C.F.R. § 402.02. The text of those statutory and regulatory provisions is set forth in the Appendix at pages 41a to 47a.

## Concise Statement of the Case

The United States Court of Appeals for the Ninth Circuit, the largest of the thirteen federal circuits, has for the last decade stood in review over the most rapid escalation of federal authority since Reconstruction, as dozens of "distinct population segments" of fish have been listed in the Pacific Northwest under the federal Endangered Species Act. No species, or even subspecies, of fish is at any risk of extinction; rather, officials of the National Marine Fisheries Service and the U.S. Fish and Wildlife Service have used Congressional authority to list populations of much larger biological species throughout the Pacific Northwest.[2]

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[1] This statute creates exclusive Ninth Circuit jurisdiction for review of most decisions of BPA; because the petition raised Endangered Species Act issues, petitioners also gave sixty-days notice pursuant to 16 U.S.C. § 1540(g).

[2] Three of dozens of listings are here relevant: 57 Fed. Reg. 14,653 (April 22, 1992) (Snake River spring/summer and fall chinook); 56 Fed. Reg. 58,619 (Nov. 20, 1991) (Snake River sockeye).

There is scarcely a body of water in the Pacific Northwest, or a project with any remote connection to water, that is not now subject to federal regulatory control under the Endangered Species Act. That control is being exercised to regulate virtually all activities that involve use of natural resources near water, shutting down farmers' irrigation[3] and paralyzing future development—the oft-stated purpose of those who invoke the Act.

Petitioners, as customers of the Bonneville Power Administration, are the victims of one of the many increasingly bizarre[4] and rapidly expanding implementations of the Endangered Species Act, one that taxes them and other electric ratepayers roughly $500 million per year in order to attempt to manufacture salmon for capture and sale by commercial salmon interests. Indeed, the administrative record confirms that BPA is spending up to $10 million per salmon (ER40 at 1)[5] to generate fish that are sold for pennies per pound by Northwest fishermen.[6] Believing that the harvest-driven program serves neither their interest nor the interest of the salmon, petitioners have repeatedly sought relief from the United States Court of Appeals from arbitrary and capricious agency conduct, causing one panel to view them as "partners in the preservation of the [endangered Snake River salmon] species." *PNGC v. Brown*, 38 F.3d 1058, 1065 (9th Cir. 1994).

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[3] *See, e.g.*, *Private ditches put on notice*, METHOW VALLEY NEWS, Oct. 21, 1999.

[4] *See, e.g.*, M. Lee, *Road projects backlog a fishy situation*, TRI-CITY HERALD, June 15, 1999 ("Richland, for example, is trying to get the OK for replacing 10 stoplights . . . a project where few can fathom a connection to fish.")

[5] Citations in the form "ER__" refer to documents from the Administrative Record, which contains roughly 2,000 documents, as presented to the Ninth Circuit as Excerpts of Record pursuant to Circuit Rule 17-1; citations in the form "1995 BiOp" refer to the biological opinion of NMFS on March 2, 1995 (ER51); and citations in the form "Buchal Aff. Ex. __" refer to documents presented in support of petitioners' motion to complete and supplement the record.

[6] Though the Endangered Species Act flatly prohibits interstate trade and commerce in listed species, the United States Court of Appeals for the Ninth Circuit has accepted the Government's representation that the Act is impossible to enforce because it is all but impossible to distinguish listed salmon from unlisted ones. *PNGC v. Brown*, 38 F.3d 1058, 1068 (9th Cir. 1994).

In this case, petitioners seek review of a decision of the United States Court of Appeals for the Ninth Circuit affirming a Record of Decision of the Bonneville Power Administration (BPA). BPA operates a network of dams and reservoirs, along with an electric transmission system, that provides more than half of the electricity supply for the Pacific Northwest.

Because listed fish are present in the Columbia River, BPA has obtained a series a biological opinions from the National Marine Fisheries Service (NMFS), the agency charged by Congress to protect endangered salmon (while at the same time promoting salmon harvesting, *see* 16 U.S.C. § 1801(c)(3)). These opinions, prepared under an atmosphere of extraordinary pressure to remove dams in the Pacific Northwest, overlooked entirely the most significant scientific evidence concerning the effect of the dams on salmon.

The opinions culminated in a 1995 biological opinion concluding that operation of the Federal Columbia River Power System to generate electric power jeopardized the continued existence of three "distinct population segments" of Snake River salmon. NMFS proposed a so-called "reasonable and prudent alternative," setting forth detailed rules for operating the dams that consisted primarily of requiring larger releases of water from upstream reservoirs during the spring, requiring the dam operators to spill water over the top of the dams rather than generating electric power, and reducing substantially the percentage of salmon transported around the dams and reservoirs. NMFS made these recommendations upon an express finding that it had no idea how much salmon mortality actually arose from dam operations, and ignored entirely substantial evidence that the impact of dam operations upon salmon survival amounted to background noise, barely detectable in the face of larger influences.

BPA's response to the biological opinion was extraordinary. BPA expressly found that NMFS' recommendations would reduce salmon survival and waste money. Yet six days after receiving the biological opinion, BPA deferred to NMFS' recommendations, adopting them in the March 10, 1995 Record of Decision now before this Court.

## Argument

### I. THE NINTH CIRCUIT NEEDS GUIDANCE AS TO THE FUNDAMENTAL PRINCIPLE OF JUDICIAL REVIEW OF AGENCY ACTION: REVIEW IS FOUNDED UPON THE "WHOLE RECORD"

The principal contribution of Western civilization is the ideal of government by law, rather than by the arbitrary dictates of those in power. As laws afford administrative officials more and more discretion, the only way to protect citizens from abuses of such discretion is through careful review of agency action. That cannot occur when, as here, BPA did not produce a complete administrative record that could permit judicial review.

### A. The Extraordinary Administrative Process

BPA's § 7 consultation process was influenced by *Idaho Dept. of Fish and Game v. NMFS*, 850 F. Supp. 886 (D. Or. 1994), *vacated as moot*, 56 F.3d 1071 (9th Cir. 1995). In the interval before petitioners succeeded in vacating that judgment, NMFS, BPA, the U.S. Army Corps of Engineers and the U.S. Bureau of Reclamation voluntarily agreed to enter into private discussions with state and tribal harvest management agencies to determine the science and law to be applied to dams. (*See* ER51, at 9) Under the supervision of Justice Department lawyers, and "by agreement among the parties, a formal record of the proceedings was not maintained for most of the events [during the consultations]" (ER52, at 2-1), a increasingly common device that itself portends the decline of administrative law.[7]

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[7] Forecasting these developments, petitioners sued to open the meetings under the Federal Advisory Committee Act (FACA), but a sharply divided panel of the Ninth Circuit denied relief, declaring that the "groups [were] under the ultimate supervision and control of the district court." *ALCOA v. NMFS*, 92 F.3d 902, 908 (9th Cir. 1996), *see also id.* at 909 (Kosinski, J., dissenting) ("If FACA does not apply in this case, it never will"); *cf. Alabama-Tombigbee River Coalition v Babbitt*, 26 F.3d 1103 (11th Cir. 1994) (applying FACA to similar ESA conduct). Foreshadowing its approach to judicial review in this case, the Ninth Circuit affirmed the trial court's refusal to provide any discovery on factual issues whatsoever in the FACA case, deciding the case based upon factual representations of Justice Department lawyers.

The most important of the secret committees was the Biological Requirements Work Group (BRWG); as BPA explained:

> The BRWG was set up as a process for receiving input from the states and Tribes, and emphasis was placed on obtaining that input, with less emphasis on other scientific points of view[8]. *** Most of the concerns with the recommended application of analytical methods and *any discussion of alternative approaches raised by BPA and others were excluded from the BRWG report by the state and Tribal participants* who performed the final report edits.

ER38, at 23 (emphasis added). Having some understanding of what was going on behind closed doors, petitioners put into the administrative record comprehensive written comments with extensive scientific submissions from world-renowed experts in salmon science in an effort to counterbalance the pernicious effects of the BRWG. (ER9; ER24; ER40)

Nevertheless, based primarily upon BRWG recommendations,[9] NMFS articulated a 5-step process for applying the Endangered Species Act to the FCRPS:

> 1. Define the biological requirements of the listed species.
>
> 2. Evaluate the relevance of the environmental baseline to the species' current status.
>
> 3. Determine the effects of the proposed or continuing action on listed species.
>
> 4. Determine whether the species can be expected to survive with an adequate potential for recovery under the effects of the proposed or continuing action, the environmental baseline and any cumulative effects, and

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[8] For reasons explained below, petitioners contend that the "other scientific points of view" referenced by BPA are not "scientific" at all.

[9] According to NMFS, it would apply "the analytical method suggested by the BRWG [as] the *primary method* of determining whether or not the biological requirements of the listed species are being met . . ." (ER36 at 15, emphasis added)

considering measures for survival and recovery specific to other life stages.

5. Identify reasonable and prudent alternatives to a proposed or continuing action that is likely to jeopardize the continued existence of the listed species." (1995 BiOp at 11-15.)[10]

NMFS found that the agency actions proposed in the 1994-98 Biological Opinion represented an improvement in the survival of endangered salmon, but not enough of an improvement "to meet the species' biological requirements." (1995 BiOp at 87-90.) NMFS and BPA thus expanded the § 7 consultations to include not merely the "effects of the . . . action," but also "effects that are, *or with further authorizations and appropriations could be*, within the action agencies' discretion . . ." (1995 BiOp at 13; emphasis added.) In other words, no operational decisions within the administrative discretion of the river operators could meet what NMFS believed were the "species' biological requirements"—acts of Congress would be required for new public works projects.

NMFS also compared the actions proposed by the agencies against a secret draft Recovery Plan for Snake River Salmon BPA had not even seen (ER38 (cover letter)),[11] explaining that it "place[d] particular importance on differences between the proposed action and the Recovery Plan" in drawing conclusions as to whether the proposed action would jeopardize the continued existence of Snake River salmon. (1995 BiOp at 88)

NMFS ultimately relied upon six factors in concluding that "operation of the FCRPS as described in the 1994-98 Biological Opinion is likely to jeopardize the continued existence of listed [Snake River salmon]." (1995 BiOp at 89, 90, 91.)

1) [status of the particular salmon stock]; 2) the fact that the proposed action differs in significant respects from the

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[10] A NMFS participant in the consultations warned that this vague process was the product of a "technical group" focusing on "legal/policy issues outside the technical group's expertise". (ER6, at 5293.)

[11] To this day, more than eight years after the first listings, NMFS has never released a Recovery Plan, or made the requisite findings that such plan "will not promote the conservation of the species", *see* 16 U.S.C. § 1533(f)(1).

> Recovery Plan; 3) the fact that the FCRPS under the proposed action is a major limiting factor in the survival and recovery of these stocks;[12] 4) the fact that life cycle considerations do not predict species' biological requirements will be met; 5) the fact that the proposed action offers only minor survival improvements over recent conditions; 6) the fact that the only way to achieve significant improvements is with long term system reconfigurations. (1995 BiOp at 89, 90, 91)

Thus NMFS proposed a so-called "Reasonable and Prudent Alternative" (RPA) pursuant to § 7(b)(3) of the ESA. The RPA included a number of immediate actions imagined by NMFS to increase survival: decreased smolt transportation, increased spill and increased flow augmentation.

BPA issued its Record of Decision on March 10, 1995, just days after NMFS issued the BiOp. BPA declared:

> As expressed in this ROD, and based upon its biological analyses and review of the science, *BPA believes a different set of actions could more effectively satisfy responsibilities under the ESA.* (App. 26a; emphasis added).

Nevertheless, BPA declared that NMFS' alternative "is a reasonable one for avoiding jeopardy to and facilitating recovery of the listed salmon species." (App. 26a) What explains this surprising result? Petitioners believe it is what is *not* reflected in the administrative record: political interference.

### B. Political Interference in the Process

*"I would like to be the first Interior Secretary to take out a really large dam."*

*Bruce Babbitt (1994)*

In tandem with the secret BRWG meetings to determine science and law, the Clinton/Gore Administration established a "Memorandum of Agreement on Pacific Salmon Conservation" in

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[12] This "finding" is unsupported, unsupportable, and contradicted by NMFS' own scientists.

October 1994, including a "Pacific Salmon Task Force" to "establish overall policies governing the development and implementation of conservation and restoration plan for Pacific salmon". (ER18, at 2) (Secretary Babbitt signed it himself.) The Justice Department's Administrative Record appears to contain only two items relating to the Task Force (ER17 and ER21).

As set forth in the accompanying Declaration of James L. Buchal, these documents reveal that at least two meetings were held in Washington, D.C. in November to discuss developments in the "Biological Requirements Work Group." The Group even discussed criticism from petitioners about their exclusion from the process and substantive critiques of the work of BRWG (ER17). The documents reveal that future meetings were planned (ER21).

After December 1994, however, the Administrative Record contains no documents emanating from this Task Force, and indeed, almost no evidence of any involvement by officials in Washington, D.C. Yet newspaper accounts reported a continuing involvement by D.C. officials.[13] An article printed the day the BiOp was released reports that the BPA Administrator "was told to cool his rhetoric and 'stop whipping BPA's customers into a frenzy' over possible electric rate hikes to pay for the salmon program."[14] The Administrative Record contains no record of this contact between D.C. officials and the Administrator, *or, indeed, any such contacts.*

Petitioners therefore moved the Ninth Circuit for an order compelling BPA to complete and supplement the record. As a matter of Ninth Circuit practice, which itself frustrates judicial review of agency action, the "Chief Court Mediator" entered an order referring the motion to the merits panel (Order, Sept. 15, 1998). The merits panel denied the motion four days before oral argument, without explanation. (App. 14a.)

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[13] Scott Sonner, *White House weighs role on salmon*, THE HERALD (Feb. 5, 1995); Les Blumenthal, *Departments clash over salmon plan funding*, TRI-CITY HERALD (March 2, 1995); and Les Blumenthal, *Future of wild salmon and the BPA linked, and time is short*, THE NEWS TRIBUNE (March 19, 1995).

[14] Les Blumenthal, *Departments clash over salmon plan funding*, TRI-CITY HERALD (March 2, 1995).

Judicial review based upon such an incomplete Administrative Record violates the rights of petitioners to due process of law. *See, e.g., Sierra Club v. Costle*, 657 F.2d 298, 406 (D.C. Cir. 1981) ("docketing of conversations between the President or his staff and other Executive Branch officers or rulemakers may be necessary to ensure due process.") It is timely for this Court to affirm that the federal judiciary will not countenance interference with judicial review of agency action.

## II. THIS CASE OFFERS AN UNPRECEDENTED OPPORTUNITY TO AFFIRM THE RIGHT OF CITIZENS TO CHALLENGE FEDERAL ENVIRONMENTAL POLICY DRIVEN BY JUNK SCIENCE

*"We are . . . worried at the dawn of the twenty-first century, at the emergence of an irrational ideology which is opposed to scientific and industrial progress and impedes economic and social development.*

*"We contend that a Natural State, sometimes idealized by movements with a tendency to look toward the past, does not exist and has probably never existed since man's first appearance in the biosphere, insofar as humanity has always progressed by increasingly harnessing Nature to its needs and not the reverse. We full subscribe to the objectives of a scientific ecology for a universe whose resources must be taken stock of, monitored and preserved.*

*"We . . . forewarn the authorities in charge of our planet's destiny against decisions which are supported by pseudoscientific arguments or false and nonrelevant data."*

*The Heidelberg Appeal (1992)*[15]

In *Bennett v. Spear*, this Court advised that § 7 (a)(2) of the Endangered Species Act must be construed "to avoid needless economic dislocation produced by agency officials zealously but unintelligently pursuing their environmental objectives." 520 U.S. 154, 176-77 (1997) (noting that this may be the "primary" reason

[15] A copy of this petition, signed by over 72 Nobel Prize winners and 3,000 scientists, may be found at http://www.heartland.org/appeal.htm

for requiring use of the "best scientific and commercial data"). This promise, however, has been undercut by application of *Marsh v. Oregon Natural Resources Council*, 490 U.S. 360, 378 (1989), wherein this Court advised lower courts that "[w]hen specialists express conflicting views, an agency must have discretion to rely on the reasonable opinions of its own qualified experts even if, as an original matter, a court might find contrary reviews more persuasive". The lower courts need guidance as to how to evaluate whether the opinions of government scientists are "reasonable." A ringing affirmation that "expert" opinion contrary to empirical data is unreasonable could eliminate hundreds of future ESA lawsuits.

The ESA requires agencies to use the best science in assessing the effect of FCPRS operations. Under § 7(a)(2), "[i]n fulfilling the requirements of this paragraph *each agency* shall use the best scientific and commercial data available" (emphasis added). Agencies cannot lawfully defer to junk science proffered by fish and wildlife agencies; under the express language of § 7(a)(2), it was the duty of *BPA*, not of NMFS, to meet the no-jeopardy requirements. NMFS merely assists in the process.[16] As set forth below, BPA violated its statutory duty by acquiescing in the use by NMFS of data it knew were wrong.

**A. Discerning the Best Science from Junk Science**

In reviewing the admissibility of expert testimony under Rule 702 of the Federal Rules of Evidence, this Court warned against the gradual dilution of scientific evidence in Federal Courts. *Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579 (1993). Under Rule 702,

> The subject of an expert's testimony must be 'scientific . . . knowledge.' The adjective scientific implies a grounding in the methods and procedures of science. Similarly, the word knowledge connotes more than subjective belief or unsupported speculation. The term 'applies to any body of known facts or to any body of ideas inferred from such facts

[16] *See also* 50 C.F.R. § 402.15(a) ("Following the issuance of a biological opinion, the Federal agency shall determine whether and in what manner to proceed with the action in light of its section 7 obligations and the Service's biological opinion").

> or accepted as truths on good grounds.' Webster's Third New International Dictionary 1252 (1986). Of course, it would be unreasonable to conclude that the subject of scientific testimony has to be 'known' to a certainty; arguably, there are no certainties in science. [Citations omitted.] But, in order to qualify as 'scientific knowledge,' an inference or assertion must be derived by the scientific method.

*Daubert*, 509 U.S. at 589-90. What is "the scientific method"? This Court explained that:

> Ordinarily, a key question to be answered in determining whether a theory or technique is scientific knowledge that will assist the trier of fact will be whether it can be (and has been) tested. "Scientific methodology today is based on generating hypotheses and testing them to see if they can be falsified; indeed, this methodology is what distinguishes science from other fields of human behavior. Green 645. *See also* C. HEMPLE, PHILOSOPHY OF NATURAL SCIENCE 49 (1966) ('[T]he statements constituting a scientific explanation must be capable of empirical test'); K. POPPER, CONJECTURES AND REFUTATIONS: THE GROWTH OF SCIENTIFIC KNOWLEDGE 37 (5th ed. 1989) ('[T]he criterion of the scientific status of a theory is its falsifiability, or refutability, or testability') (emphasis deleted).

*Id.* at 593. Simply put, factual assertions that are refuted, or falsified, by available data cannot be regarded as "science."

In this case, as explained below, BPA acquiesced in recommendations by the National Marine Fisheries Service that were contrary to the available data. BPA knew that the only rational conclusion to be drawn from the data was that NMFS' recommendations would *decrease* salmon survival, but adopted them anyway. This Court may be reluctant to accept assertions by aluminum companies that fisheries professionals would knowingly recommend a course of action that could only reasonably be regarded as killing fish. Two factors may help explain these extraordinary claims.

First, the Court needs to understand the degree to which the science of biology has departed from the scientific method that has heretofore characterized "science." One law review article promoting the new "science" of "conservation biology" explained:

> A distinguishing feature of conservation biology is that it is mission oriented. Underlying any mission is a set of values. Philosophers of science now recognize that no science is value free, despite all we were taught in school about the strict objectivity of the scientific method. Conservation biology is more value-laden than most sciences because it is not concerned with knowledge for its own sake but rather is directed toward particular goals.[17]

Conservation biologists "view species extinction and loss as a crisis of major proportions that requires a drastic shift in our governing policies."[18] The value-laden nature of conservative biology, exacerbated by its crisis-driven viewpoint, filters out data refuting conservation concerns.

In a time when science, particularly environmental science concerning human impact on the environment, has become strikingly more politicized, it is ever more important that the federal judiciary protect citizens from political appointees manipulating agencies whose conduct is supposed to be constrained by law. Politicians are even beginning to argue that "empirical science" is somehow inferior to "science by consensus,"[19] as if political-style vote of "scientists" overcomes actual data.

Dams are particularly susceptible to political attack:

> In the view of conservationists, there is something special about dams, something—as conservation problems go—that is disproportionately and metaphysically sinister. The outermost circle of the Devil's world seems to be a moat

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[17] R. Noss, *Some Principles of Conservation Biology as They Apply to Environmental Law*, 69 CHICAGO-KENT L. REV. 893, 895 (1994).

[18] R. Keiter, *Conservation Biology and the Law: Assessing the Challenges Ahead*, 69 CHICAGO-KENT L. REV. 911 (1994).

[19] *See* http://sepp.org/misuse/envirltr.html

> filled mainly with DDT. Next to it is a moat of burning gasoline. Within that is a ring of pinheads each covered with a million people—and so on past phalanxed bulldozers and bicuspid chain saws into the absolute epicenter of Hell on earth, where stands a dam. (JOHN MCPHEE, ENCOUNTERS WITH THE ARCHDRUID (1971)).

Technology that improves salmon survival with dams in place is anathema to such conservationists, who have issued blizzards of distortions about the scientific positions of BPA and the dam operators.

The second factor involved in causing the science of dams and salmon to become entirely untethered to data (and indeed reality) is the overwhelming degree to which the overharvest sanctioned by NMFS and State and Tribal fishery agencies is responsible for declines in wild salmon populations. Year after year, these agencies set harvest levels based upon massive hatchery releases, levels less productive wild populations cannot withstand. Nat'l Research Council, UPSTREAM: SALMON AND SOCIETY IN THE PACIFIC NORTHWEST 305 (1996). All over the earth, marketable fish populations are in decline; but in the Pacific Northwest, dams form a scapegoat that distracts attention from enormous fishery agency mismanagement.

**B. Scientific Data Does Not Support Agency Assertions Blaming Dams for Salmon Decline, and Agencies Ought Not To Be Privileged to Ignore that Data.**

In assessing the effects of dam operations, NMFS and BPA focused on estimates of "total passage mortality." As NMFS explained, "total passage mortality is referred to as mortality from 'passage through the FCRPS' [Federal Columbia River Power System], recognizing that *operation of the FCRPS is only one component of total mortality*." (ER51, at 67-68; emphasis added)

The most accurate estimates of total passage mortality are provided by a University of Washington computer model called CRiSP. (*See* ER51, at 71) CRiSP estimates, for example, that total survival for spring/summer chinook through the entire river system, across eight dams and through eight reservoirs, is roughly 60% (ER32, at 50873).

NMFS and BPA are unwilling to say whether this survival rate is higher or lower than the salmon would achieve in a natural system without the FCRPS. Several independent lines of evidence confirm that the effect of BPA's operational decisions at the dams is *de minimis*.

First, the salmon at issue migrate upstream through up to eight mainstem dams and spawn in the Snake River and its tributaries. Their progeny migrate downstream through the same dams. Salmon produce thousands of eggs; under natural conditions, most of the salmon hatching from these eggs are not, by Nature's design, expected to survive to adulthood. Indeed, over the long run, only two of the thousands of eggs can produce successfully spawning adults, or the world would be swimming in salmon. Natural causes kill nearly all Snake River salmon. *See generally* ER9, at 6-7; ER24, at 5-8 (citing authorities).

Second, comparisons have been made between rivers with and without dams. Both show parallel patterns of decline, leading most researchers to conclude that changes in ocean ecology are responsible for the vast majority of variance in salmon populations. (*See, e.g.*, ER29) Scientific literature suggests that all species of salmon suffer high mortality migrating downstream, ranging from 70-90%, *an amount higher than the mortality Snake River suffer in the FCRPS* (including transported fish). *See generally* ER24, at 5-7 (citing numerous studies). Comparisons have also been made of the number of returning "recruits per escapee" in various river systems, and *there is no difference between the Columbia River and pristine Canadian rivers, also afflicted with declining salmon runs*. (ER27: McNeil, Recruits per Escapee for Columbia Basin Anadromous Salmonids)

Third, and perhaps most compelling, scientists have measured the survival rate per unit distance above the FCRPS and within the FCRPS. The result? There is no difference in survival; "marked cohorts experienced similar survival in undammed and dammed reaches." (ER27: McNeil, "Survival of Marked Juvenile Chinook & Steelhead Migrants in the Columbia River Basin) Mortality caused by the dams cannot be distinguished against the larger background of natural mortality.

These several lines of independent evidence were all ignored entirely by both NMFS and BPA. Though the papers are buried in the Administrative Record, because petitioners put them there, neither the Biological Opinion nor the ROD cite to, refer to, or discuss any such evidence in any way. The Ninth Circuit below did not even mention this evidence, or the agency's duty to consider it, acting as if it could take judicial notice that dam operation decisions doom salmon runs despite contrary evidence. *See also NRIC v. NWPPC*, 35 F.3d 1371, 1375-76 (9th Cir. 1994) (containing extensive recitation of twenty-year-old evidence concerning the impact of dams on salmon, prior to substantial improvements in fish passage facilities).[20]

### C. Scientific Data Does Not Support the Operational Changes Demanded by NMFS, and Acquiesced in by BPA.

The Ninth Circuit did address the question of the scientific backing for the operational changes demanded by NMFS, but only at the most general level. The Court characterized petitioners' position as "essentially an effort to rehash the multi-year scientific debate . . ." and declared that "NMFS engaged in a detailed analysis of these issues and weighed the available data." (App. 9a) This position lacks support in the Administrative Record. NMFS overlooked numerous critical issues; where it did "weigh data," it did so by assigning controlling weight to politically-correct "scientific" opinion that was refuted by all available data.

#### 1. Scientific Data Utterly Refutes NMFS' Conclusion that Decreasing Transportation Would Protect Salmon, as BPA Expressly Recognized.

For decades, a large percentage of Snake River salmon have been collected at upriver dams and transported downstream, eliminating exposure to losses from swimming through hundreds of miles of river (and dams). As the National Research Council has pointedly observed: "No investigator to date has provided the

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[20] Petitioners are aware that members of the Ninth Circuit have received education on dams and salmon from self-styled salmon advocates through continuing education programs at the Lewis & Clark Law School in Portland, Oregon; a lawyer for the Northwest Power Planning Council has suggested that the Ninth Circuit Court thereafter adopted the "entire opus" of one of the School's professors. J. Volkman, *Steering by Dicta*, 25 ENV'TL LAW 385, 385 (1995)

Columbia River region with experimental results that demonstrate higher survival of inriver migrants than transported migrants at any [river] discharge level. Until such experimental data become available, transportation should continue to be used."[21]

State and Tribal fishery agencies oppose transportation of smolts. They have employed a variety of fictions in the effort, ultimately developing the FLUSH computer model, which predicts, contrary to all available scientific evidence, that there are little or no benefits to transportation.[22]

The operational changes NMFS proposed in the RPA *decreased* transportation of salmon smolts. NMFS declared that water should be spilled at the projects where salmon were collected for transportation, thereby reducing the number of fish collected. BPA warned NMFS that while it characterized the spill program as "experimental," "the spill operations described are not in an experimental context, particularly with respect to spill at transport projects *where the operation will reduce the number of fish transported, and therefore, fish survival.*" (ER38, at 14) In its ROD, BPA expressly found that "increasing spill at fish transportation projects . . . [is] likely to reduce juvenile survival." (App.29a.)

Other than the State and Tribal biologists and environmentalists, every biologist involved in the consultations advised NMFS that "reducing emphasis on transportation in the Snake River will be counterproductive." (ER19, at 8582) Outside

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[21] UPSTREAM at 253.

[22] The FLUSH model predictions of salmon survival were highly inaccurate, prompting NMFS staff to advise that "failure [of the FLUSH model] to account for results of recent survival studies is a *serious oversight that does not conform with NMFS' obligation to consider the best available scientific information*" (ER39, at 13111 (emphasis added))

Nevertheless, NMFS and BPA relied upon the FLUSH model, with NMFS explaining that because of "differences in 'beliefs' between the state/tribal modeling team and the Bonneville/University of Washington team", NMFS would have to exercise "professional biological judgment." (ER36, at 14) The Ninth Circuit found petitioners' claims about the models "unfounded" because NMFS placed less weight upon the FLUSH model. (App. 10a) But § 7(a)(2) should not be construed to permit BPA and NMFS to give undisclosed "weight" to state and tribal "beliefs" flatly contrary to every bit of available scientific data.

biologists warned of an extensive anti-transportation bias that pervaded NMFS' "scientific" review. (ER10, at 2-6)

BPA's decision to reduce the number of Snake River salmon transported, and hence reduce survival, is arbitrary and capricious not merely as a decision "that runs counter to the evidence before the agency," *Motor Vehicle Mfg. Ass'n v. State Farm Mut. Automobile Ins. Co.*, 463 U.S. 29, 43 (1983), but counter to the agency's own findings. BPA cannot, consistent with its statutory missions to protect fish and generate power, take an action, such as reduced transportation through spill, that it knows will probably kill fish and certainly waste power.

**2. Increased Spill Over FCRPS Dams Was Contrary to the Scientific Evidence before BPA**

Spilling water, and thus fish, over the top of most of the mainstem dams generally produces less *direct* mortality than other passage routes (except transportation). However, the spill causes very high levels of dissolved gas in the water, which can injure fish. Based upon losses to Columbia River salmon in the 1970s, EPA established a national water quality criterion limiting total dissolved gas (TDG) to 110% of normal saturation.

In the BiOp, NMFS abandoned the 110% TDG standard, declaring that spill would only be reduced "when instantaneous TDG levels exceed 125% of [normal] saturation," or lesser amounts over longer time periods.[23] (1995 BiOp at 106). The best available scientific evidence indicated that this action would affirmatively injure Snake River salmon. Indeed, experts warned BPA and NMFS that "by allowing dissolved gas levels in these rivers to rise above the U.S. EPA guideline, some populations [of anadromous fish] may be lost entirely." (ER45, at 1-2; *see also* ER43) The CRiSP model predicted that spill levels causing the 110% criterion to be exceeded would decrease salmon survival. (ER41; *see also* Buchal Decl. Ex. 4, at 4). NMFS' own scientists had even measured survival *decreases* in 1994 after BPA permitted

[23] NMFS did reference possible spill limitations from the existing 110% TDG state water quality standards, but obtained waivers from those state standards.

additional spill at NMFS' request. (ER40, at 4 (quoting NMFS study)).[24]

BPA warned that an independent Scientific Panel convened by NMFS supported the existing published state and Federal water quality standards of not exceeding 110% TDG for outmigrating smolt and inmigrating adult populations, indicating that "the effects of exceeding 110% is uncertain but in the direction of damage." (ER38, at 11; *see also* ER7, at 52,167 (Scientific Panel also warns that "[m]ore recent reviews suggest that more stringent levels of TDG are advisable for full protection.")).

NMFS proposed to minimize the risks to the salmon through a monitoring program. (BiOp at 110) BPA warned NMFS that it was impossible to use real-time information to protect the salmon against excessive spill. (ER38, at 11) And the smolt monitoring program was such a farce that it provoked Congressional hearings. In 1994, high levels of gas bubble disease symptoms detected in the two-inch fish with 90-100 power microscopes triggered reduced spills, so in 1995, the monitors used 10 power magnifying glasses instead and found no symptoms, despite higher TDG levels.[25]

Petitioners, aided by retired NMFS scientists, have also pointed out for several years that adult fish passage facilities at the dams are not engineered for extreme levels of spill.[26] BPA knew that it was irrational to adopt measures imagined to protect juveniles with known adverse effects on adults. BPA told NMFS that "actions to achieve [improved survival] at each dam *must be studied in context with potential effects these actions may have on reservoir survival and adult passage.*" (ER38, at 8) BPA even chastised NMFS for failing to cite "numerous observations on [problems with adult passage from high spill] that should be cited." (ER38, at 12).

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[24] *See also* Buchal Declaration Ex. 9 (post-BiOp declines in survival from spill).

[25] *Hearing before the Subcommittee on Drinking Water, Fisheries and Wildlife, Salmon Spill Policy on the Columbia and Snake Rivers*, 104th Cong., 33 (June 22, 1995).

[26] *See, e.g.*, Buchal Decl. Ex. 3 ¶¶ 14-16.

Ultimately, however, BPA and NMFS never even attempted to balance potential positive effects on juveniles and negative effects on adults to reach a rational conclusion concerning the overall effects of spill. This renders the ROD "arbitrary and capricious" because BPA has "entirely failed to consider an important aspect of the problem," *Motor Vehicle*, 463 U.S. at 43. It is especially important that BPA consider effects on adults because the adults are the few survivors of the thousands of eggs; loss of adults has a much greater impact on future population size.

### 3. Scientific Evidence Suggested No Benefits Whatsoever from the Single Most Expensive NMFS Recommendation: "Flow Augmentation"

NMFS also recommended, and BPA acquiesced, in a program of greatly increased "flow augmentation." Under these programs, water is released from upstream reservoirs at times imagined to promote downstream salmon migration—albeit retarding the upstream migration, a factor ignored entirely by the agencies. Although the programs have increased releases steadily since the early 1980s, to the point where millions of acre-feet of water are released annually, *no scientific study has ever found any measurable changes in survival of Columbia Basin salmon from flow augmentation programs.*[27]

BPA objected to flow augmentation in a prior 1993 ROD. (ER1, at 31). BPA even found the program to be counter-productive, in that it "jeopardize[s] efforts to help returning fall adults, which studies show to be at significant risk." (ER1, at 30; *see also* ER2, at 55). BPA "lost" its 1995 findings on the subject.[28]

BPA's views are shared by the National Research Council, which pointed out that it is a "common misperception" in the Pacific Northwest that there have been significant changes in

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[27] The National Research Council has suggested that it would be "logical" to do additional experiments, but "that requires the cooperation of fishery managers, who have too often resisted, fearing that the data would undermine their position in the debate". UPSTREAM, at 352.

[28] A document in the Administrative Record cross-referenced the findings, but the findings themselves do not appear in the index of the Record of BPA filed with this Court. (*See* Buchal Decl. ¶ 12 & ER38, at 28).

Snake River flow associated with salmon decline (UPSTREAM at 193); the Council concluded "the effectiveness of flow augmentation has not been demonstrated" (*id.* at 209). Several independent experts advised BPA that "existing data and scientific analyses do not support flows at the levels called for." (*See, e.g.*, ER44, at 1)

Flow augmentation is the single most expensive component of NMFS' RPA. BPA proposed to spend $142 million acquiring water from the Upper Snake River held in U.S. Bureau of Reclamation reservoirs, thereby burdening ratepayers with the Bureau's ESA compliance costs. (*See* ER50, at 22,456) BPA even proposed to pay Idaho Power Company $10 million to "shape" the release of water from Idaho Power's reservoirs for Snake River salmon, thereby burdening BPA ratepayers with Idaho Power's ESA compliance costs. (*See id.*)

Frank disregard for the enormous costs and non-existent benefits of flow augmentation cannot constitute "a reasonable accommodation of conflicting policies that were committed to the agency's care by the statute." *ALCOA v. BPA*, 903 F.2d 585, 598 (9th Cir. 1989) (citation omitted). BPA's duty to provide "economical" power at the "lowest possible rates" is rendered meaningless if BPA is permitted to raise its rates without any reasonable prospect of achieving a countervailing policy objective

**4. BPA Relied on a Jeopardy Analysis that Assessed Population Viability In Grossly Defective Ways.**

Having listed tiny segments of true "species," NMFS then, through the secret BRWG process, disaggregated the Snake River salmon into 39 even tinier units. As BPA has explained, "[t]he spring/summer chinook ESU is a metapopulation of approximately 39 stocks. Currently none of the life-cycle models simulate the ESU as a metapopulation." (ER38, at 25)

A "metapopulation" is a group of populations which interbreed. In the case of spring/summer chinook salmon, this interbreeding between populations means that one cannot treat the 39 stocks separately, but must take account of the interactions between them. In particular, independent reviewers criticized the BRWG process for failing to discuss "highly relevant information concerning the significance of straying between small salmon

populations in assessing overall population viability. (ER30, at 50890; *see also* ER31, at 50879 (noting "re-colonization [may be] quite likely if one of the stocks should be extirpated"). BPA had available the only model that simulated the spring/summer chinook salmon ESU as a metapopulation using index stock data, and that computer model indicated "*a virtually certain persistence of Snake River spring chinook over the next 100 years . . .*" (ER35, at 14; emphasis added).

The BRWG, however, arbitrarily selected certain of the 39 stocks as "index stocks", developed survival and recovery targets that BPA characterized as "arbitrary and hav[ing] little scientific basis" (ER38, at 23-24), and told NMFS that life-cycle modeling must indicate a "high" probability that salmon populations would be above the "recovery" thresholds in 24 and 48 years in order to permit agency action to go forward.[29] As set forth below, this pseudoscientific approach became the basis for the legal evaluation of whether dam operations jeopardized the continued existence of salmon.

### D. This Court Must Act to Protect Citizens Against Government Junk Science.

The net result of the approach to judicial review embodied in the opinion below is that if there are genuine and material issues of scientific fact in a contest between citizens and the government, the Government always wins. This approach is not unique to the Ninth Circuit. *See, e.g., Marathon Oil Co. v. Environmental Protection Agency*, 830 F.3d 1346, 1355 (5th Cir. 1987) (challenges to quality of EPA science are "usually futile"). To adopt this standard of review is to abdicate the judicial role, failing utterly to protect American citizens against those misrepresent science. The government "scientists" know this, are well aware of these decisions, and the scientific process continues to decay.

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[29] This unique approach to evaluating "jeopardy" was specially developed for assessing dam operations—and is so stringent that NMFS cannot apply it in any other context, as for example in numerous biological opinions permitting massive commercial harvest of listed stocks.

## III. BPA ADOPTED THE WRONG LEGAL STANDARD TO DETERMINE WHETHER ITS PROPOSED ACTIONS JEOPARDIZED THE CONTINUED EXISTENCE OF SNAKE RIVER SALMON

NMFS' conclusion that dam operations would jeopardize the continued existence of Snake River salmon was wrong, and BPA knew it was wrong. NMFS had interpreted § 7(a)(2) to require BPA to manipulate dam operations so as to assure future recovery of Snake River salmon in the face of overfishing and adverse natural trends, *an impossible task*. Yet BPA acquiesced in the decision, abandoning its proposed action and accepting NMFS' conclusion that the "reasonable and prudent alternative" (RPA) must be adopted to avoid jeopardizing the continued existence of listed species. It is axiomatic that "an order may not stand if the agency has misconceived the law." *SEC v. Chenery Corp.*, 318 U.S. 80, 94 (1943).

### A. The Law

Section 7(a)(2) requires that

> Each Federal agency shall, in consultation with and with the assistance of the Secretary, insure that any action authorized, funded, or carried out by such agency (hereinafter referred to as an 'agency action') is not likely to jeopardize the continued existence of endangered species or threatened species. 16 U.S.C. § 1536(a)(2).

The applicable Federal regulations declare that agency action "jeopardizes the continued existence of" a listed species when the action "reasonably would be expected, directly or indirectly, to *reduce appreciably the likelihood of both the survival and recovery*[30] *of a listed species* in the wild by reducing the

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[30] In the Federal Register notice accompanying the regulations, NMFS explained that "the word 'both' was added by the proposed rule to emphasize that, *except in exceptional circumstances, injury to recovery alone would not warrant the issuance of a 'jeopardy' biological opinion.*" 51 Fed. Reg. 19926, 19934 (June 3, 1986) (emphasis added). NMFS stated that "[t]he 'continued existence of the species' is the key to the jeopardy standard, placing an emphasis on injury to a species' 'survival.'". *Id.* BPA strenuously objected to NMFS' jeopardy standard for dams on precisely this ground, stating that it "[e]xceeds what is necessary to avoid jeopardy. According to the NMFS/FWS regulations on interagency

reproduction, numbers or distribution of the species." 50 C.F.R. § 402.02 (emphasis added).

Further guidance is found in the definition of "effects of the action," which means:

> the direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action, *that will be added to the environmental baseline*. The environmental baseline includes the past *and present* impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early section 7 consultation, and the impact of State or private actions which are contemporaneous with the consultation in progress. 50 C.F.R. § 402.02.

In other words, BPA and NMFS were supposed to determine the incremental effect of the agency action against a baseline, and see whether it "reduces appreciably" both salmon survival and recovery. BPA and NMFS never did, instead adopting the theory that if the salmon were unlikely to recover, BPA was jeopardizing their continued existence, without regard to the effect of anything BPA did. In fact, computer predictions of unlikely recovery were mostly the product of assuming continuing overfishing.[31]

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cooperation, recovery is relevant to a jeopardy standard only if an action makes recovery 'unattainable.'" (ER38, at 2)

As a practical matter, incorporating recovery into the jeopardy standard meant that achieving "no-jeopardy" conditions was impossible: "The fact is that drought and reduced ocean survivals have frustrated attempts to assist salmon recovery." (ER19, at 8582; *see also* ER5, at 52,188 (advising against incorporating recovery criteria into jeopardy analysis)) The opinion below declared, without explanation, that "we find no fault with the method in which NMFS included in the jeopardy calculus the listed species' potential for recovery." App. 10a n.6

[31] BPA and NMFS included in the computer modeling of FCRPS actions extraordinarily high levels of continuing future salmon harvest. NMFS called the "most extreme fishery reduction" inriver harvest rates of 15-36% or even higher, and a 30% drop in the extraordinarily high ocean harvest rates prevailing from 1988-93. (ER33, at 12274-75) Never before has an agency deferred to a finding

**B. BPA and NMFS Failed to Make a Reasonable Effort to Identify the Effects of Agency Action.**

NMFS correctly noted that:

> Juvenile and adult passage mortality through the FCPRS projects (reservoirs and dams) can conceptually be divided into: natural mortality that would have occurred in the pre-project river; additional mortality due to the existence of the projects; additional mortality that varies with the operation of the FCRPS; and additional mortality from other human activities. (1995 BiOp at 67)

Under the statute and regulations, it is only the "additional mortality that varies with the operation of the FCRPS" that should have been considered in evaluating the "effects of the action," because those are the only effects that will be "added to the environmental baseline" by the agency action. The "environmental baseline" includes natural mortality and mortality arising from existence of the dams.[32]

NMFS complained that its computer models "do not yield mortalities separated into the four conceptual categories described above." (1995 BiOp at 67) Thus NMFS acted as if each and every fish that died in the Columbia River died because of the agency action subject to consultations, repeatedly confusing the agency action subject to consultation with overall mortality. (*e.g.*, 1995 BiOp at 87, 90)

That was gross error. The Corps of Engineers advised that:

> Juvenile salmon mortality values should be reported from other large river systems that are unimpounded, and also shown along with estimated transportation mortalities through the same river reach. The estimated mortality *differences* between total and natural or transportation

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that its own action jeopardized the continued existence of a listed species because excessive hunting and fishing of a "species" is expected to continue in the future.

[32] Effects arising from the *existence* of the dams does not constitute the agency action subject to consultation. Congress did not intend § 7 of the ESA to turn back the clock and require agencies to undo the continuing effects of projects long ago completed. *Sierra Club v. Babbitt*, 65 F.3d 1502, 1510 (9th Cir. 1995) ("Congress did not intend for section 7 to apply retroactively").

> mortality are what should be reported, with appropriate error bounds, as mortality caused by FCRPS operation and other human-caused factors. (ER37, at 13042)

NMFS had even more precise estimates available through CRiSP. While computer models do not produce survival estimates separated into all four of NMFS' conceptual categories, they do produce the only relevant survival estimate: changes in mortality that vary with operation of the FCRPS. Indeed, that is how NMFS was able to conclude that "the proposed action offers . . . minor survival improvements" (1995 BiOp at 89, 90, 91)[33]

Again exhibiting excessive deference to BPA's deference, the opinion below did not address these issues at all, though they were raised below and petitioners strenuously urged the agency to make a rational attempt to discern the "effects of the action."

### C. NMFS Blamed the Dams for Everything Wrong with Salmon, and BPA Unlawfully Acquiesced.

One participant warned early in the secret consultations that "there seems to be major confusion" concerning the jeopardy standard, and posed the question whether "the decision [is] based on absolute population status (e.g. overall persistence likelihood), or on changes in that likelihood resulting from the action under consultation?" (ER6, at 5293) That "confusion" was never resolved, as the agencies confounded the "effects of the action" with the needs of the fish in an jeopardy analysis that was arbitrary, capricious, and contrary to law.

Most of the reasons NMFS gave for finding that the dams jeopardized the continued existence of Snake River salmon had nothing to do with dam operations. The precarious status of the stocks is a factor in every § 7 consultation, and here resulted almost exclusively from factors having nothing to do with the dams. NMFS found that "95% in the total reduction in estimated historic abundance of Snake River spring/summer chinook

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[33] It is critical for this Court to understand that the only rational means to assess the effect of FCRPS operations is through computer modeling. Only computers can aggregate the complex positive and negative effects of any particular operational change. *Cf. Sierra Club v. Costle*, 657 F.2d 298, 332 (D.C. Cir. 1981).

occurred prior to the mid-1900s." (1995 BiOp at 3-4) The Snake River sockeye declined in substantial part because the Idaho Department of Fish and Game poisoned their nursery lakes to promote trout populations.[34] And the Snake River fall chinook salmon collapsed after the construction of the (private) Hells Canyon Complex, which blocked migration entirely,[35] and remain subject to extraordinarily high harvest levels.

If federal agency action were held to jeopardize the continued existence of listed species merely because "life cycle considerations do not predict species' biological requirements will be met" (1995 BiOp at 89, 90, 91), any and all Federal agency action with any remote effect on the species, positive or negative, can be barred, based upon the whim of Administration officials. The Ninth Circuit specifically affirmed this position, declaring, contrary to the administrative record,[36] that "the species already stands on the brink of extinction, and the incremental improvements pale in comparison to the requirements for survival and recovery." App. 11a. There is no longer any law in the Ninth Circuit constraining fish and wildlife determinations as to whether public (or private) actions jeopardize the continued existence of listed species. Only political considerations constrain fish and wildlife agency claims.

## IV. THIS CASE OFFERS AN UNPRECEDENTED OPPORTUNITY TO PROVIDE GUIDANCE TO AGENCIES ACROSS THE WEST FACED WITH CONFLICTING STATUTORY MANDATES

Although BPA characterized the ROD as a "final decision of the BPA Administrator take pursuant to the Northwest Power Act," BPA offered no explanation in the ROD whatsoever of how its

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[34] Buchal Decl. Ex. 2, at 5

[35] Buchal Decl. Ex. 2, at 9

[36] The only technically competent study of extinction risk in the record, not discussed in any agency decision documents, reports virtually no chance of extinction for the 38 runs of salmon (out of the thousands of populations) listed "*a virtually certain persistence of Snake River spring chinook over the next 100 years . . .*" (ER35, at 14; emphasis added).

decision to adopt the RPA was consistent with its duties under the Act.

The Act directs BPA to "assure the Pacific Northwest of an adequate efficient, economical and reliable power supply", 16 U.S.C. § 839(2).[37] Several other laws, which pursuant to the Northwest Power Act] are all intended to be construed in a consistent manner" (16 U.S.C. § 839[38]), provide further guidance for BPA in performing its statutory obligations to supply electricity. In particular, BPA is directed to minimize expenses incurred in producing electricity, so as to promote the "widest possible use" (16 U.S.C. § 832a(b); *see also id.* § 825s) at the "lowest possible rates to consumers consistent with sound business principles . . ." (*id.*).

BPA is also supposed to carefully consider what adverse impact on salmon is actually caused by power production, because BPA is permitted to fund only those measures which are needed to mitigate adverse effects of the dams. 16 U.S.C. § 839b(h)(8)(B) ("Consumers of electric power shall bear the cost of measures designed to deal with adverse impacts caused by the development and operation of electric power facilities and programs only").

Here, petitioners presented BPA with a precise ranking of salmon recovery measures by cost-effectiveness (ER11), yet BPA offered no explanation of why it chose profoundly ineffective and expensive means of improving salmon survival when cost-effective means were available. BPA has discretion to adopt a less than cost-effective set of means to any particular result, but it would eviscerate the repeated Congressional demands for economy

---

[37] BPA knew before it agreed to implement the program that "Fish cost increases required by the 1995 biological opinion probably will add 5 to 10 percent to the rate increase presently contemplated; *clearly putting BPA in the competitive danger zone.*" (ER34, at 11866.) Outside consultants warned that the increased costs could raise rates 10-20% initially, causing customers to flee and ultimately producing rates 60% higher for remaining customers. (ER23, at 9198)

[38] "The purposes of this chapter, together with the provisions of other laws applicable to the Federal Columbia River Power System, are all intended to be construed in a consistent manner. Such purposes are also intended to be construed in a manner consistent with applicable environmental laws." 16 U.S.C. § 839.

in electricity if BPA could adopt expensive and ineffective means without at least explaining the action.

For all one can tell from reviewing the ROD, BPA ignored entirely its statutory duties to provide low-cost electricity. This Court "must find agency action to be in violation of the APA if the agency has 'failed to consider an important aspect of the problem' or has 'offered an explanation for its decision that runs counter to the evidence before the agency.'" *People of the State of California v. FCC*, 905 F.2d 1217, 1230 (9th Cir. 1990) (citation omitted). BPA failed to explain in any respect the balance struck between power and fish.

Where, as here, an agency plainly perceives *and expressly finds* a more effective way to balance its responsibilities, saving the citizens of the Pacific Northwest literally billions of dollars and saving the salmon, Congress cannot have intended to afford the agency sufficient discretion to set that plan aside in favor of politically-correct junk science. Without intervention by this Court, agencies will no longer even make the effort to evaluate "more effective ways" to balance the ESA and their other important statutory missions. They will simply implement without question the will of the political appointees "zealously but unintelligently pursuing their environmental objectives." *Bennett*, 520 U.S. at 176-77.

## Conclusion

This Court should not grant review because of the interests of these petitioners in low-cost BPA power. This Court should grant review because the livelihood of hundreds of thousands of mostly rural citizens in the Pacific Northwest depend upon a rational, science-based implementation of the Endangered Species Act, an implementation that cannot be achieved without significant intervention by the United States judiciary. One can only wonder whether anything but the Court's intervention to restore the rule of law to the Pacific Northwest can stem the rising tide of civil disobedience and disrespect for law, as individuals and even

county governments[39] defy federal authority they correctly perceive as arbitrary, capricious, and unconstrained by law.

Respectfully Submitted,

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November 18, 1999

[39] *See, e.g., Feds tell Elko County to pay up or face lawsuit*, LAS VEGAS SUN, Sept. 2, 1999.

(2) Supreme Court, U.S.
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OFFICE OF THE CLERK

No. 99-

IN THE

# Supreme Court of the United States

OCTOBER TERM, 1999

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COLUMBIA FALLS ALUMINUM CORP., ELF ATOCHEM NORTH AMERICA, INC., GOLDENDALE ALUMINUM CORP. (F/K/A COLUMBIA ALUMINUM CORP.), KAISER ALUMINUM & CHEMICAL CORP., NORTHWEST ALUMINUM CO., REYNOLDS METALS CO., VANALCO, INC.,

*Petitioners,*

*-- against --*

ADMINISTRATOR, BONNEVILLE POWER ADMINISTRATION.

*Respondent.*

## APPENDIX TO PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES COURT OF APPEALS FOR THE NINTH CIRCUIT

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## APPENDIX

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UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

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| ALUMINUM COMPANY OF AMERICA, COLUMBIA ALUMINUM CORPORATION, COLUMBIA FALLS ALUMINUM COMPANY, ELF ATOCHEM NORTH AMERICA, INC., INTALCO ALUMINUM CORPORATION, KAISER ALUMINUM & CHEMICAL CORPORATION, NORTHWEST ALUMINUM COMPANY, REYNOLDS METALS COMPANY, and VANALCO, INC., | ) | No. 95-70480 |
| Petitioners, vs. ADMINISTRATOR, BONNEVILLE POWER ADMINISTRATION, | ) | OPINION |
| Respondent. | ) | |

Petition to Review a Decision of the Bonneville Power Administration.
Argued and Submitted Jan. 11, 1999.
Filed May 10, 1999.
Before: LEAVY, McKEOWN, and WARDLAW, Circuit Judges.
McKEOWN, Circuit Judge.
Opinion by Judge McKeown.

*1157 James L. Buchal, Murphy & Buchal, Portland, Oregon, for the petitioners.

Ellen D. Katz, United States Department of Justice, Environment and Natural Resources Division, Washington, D.C., for the respondent.

This proceeding is the latest in a series of cases involving the continuing conflict between salmon and hydropower, "the two great natural resources of the Columbia River Basin." Northwest Resource Info. Ctr., Inc. v. Northwest Power Planning Council, 35 F.3d 1371, 1375 (9th Cir.1994). Salmon, as anadromous fish, hatch in freshwater tributaries, and then travel as juveniles or "smolts" to the ocean, where they reach maturity. As adults, salmon return to their natal streams and lakes to spawn and die. In traveling to and from the Pacific Ocean, the salmon species at ***1158** issue here [FN1] must pass through or around [FN2] dams and reservoirs that are part of the world's largest hydropower system, the Federal Columbia River Power System (the "FCRPS"). The U.S. Army Corps of Engineers (the "Corps") and the U.S. Bureau of Reclamation (the "Bureau") operate the FCRPS. In turn, the Bonneville Power Administration (the "BPA") markets the hydroelectric power generated by the FCRPS.

> FN1. This case involves Snake River sockeye and Snake River spring/summer and fall chinook, which are subject to protection under the Endangered Species Act of 1973, 16 U.S.C. §§ 1531-1544.
>
> FN2. At certain dams, a portion of the juvenile salmon are loaded into tanker trucks or barges equipped with river water circulation systems and transported to a release site downstream.

In 1995, the National Marine Fisheries Service ("NMFS") declared that the then proposed FCRPS operations plan would jeopardize the continued existence of the salmon at issue and recommended measures to avoid such jeopardy. On March 10, 1995, the BPA issued a Record of Decision adopting NMFS's suggestions (the "1995 ROD"). In June 1995, several companies that purchase power from the BPA, known as direct service industrial customers (collectively, the "DSIs"), petitioned for review of the 1995 ROD, claiming among other things that the BPA acted arbitrarily, capriciously, or contrary to law in adopting the remedial measures proposed by NMFS. The DSIs also contend that the BPA inappropriately failed to prepare an environmental impact statement. We have jurisdiction pursuant to 16 U.S.C. § 839f(e)(5), and we deny the petition.

## I. Background

### A. Endangered Species and the Statutory Framework

The events giving rise to this dispute began with NMFS's identification in 1991 of Snake River sockeye as an endangered species and NMFS's listing in 1992 of Snake River spring/summer and fall chinook as threatened species. [FN3] As a result, these salmon species came under the protection of the Endangered Species Act, section 7 of which mandates, in part, that:

> FN3. A species is classified as "endangered" if it is "in danger of extinction throughout all or a significant portion of its range." 16 U.S.C. § 1532(6). A species is classified as "threatened" if it is "likely to become an endangered species within the foreseeable future throughout all or a significant portion of its range." 16 U.S.C. § 1532(20). In 1994, the status of spring/summer and fall chinook was changed from threatened to endangered. Ramsey v. Kantor, 96 F.3d 434, 437 n. 1 (9th Cir.1996).

> Each Federal agency shall, in consultation with and with the assistance of the Secretary [of the Interior or Commerce], insure that any action authorized, funded, or carried out by such agency ... is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined by the Secretary to be critical....

16 U.S.C. § 1536(a)(2). This subsection further provides:

> In fulfilling the requirements of this paragraph each agency shall use the best scientific and commercial data available.

Id. With regard to salmon, the Secretary of Commerce has delegated its authority to NMFS. See 50 C.F.R. § 402.01(b); American Rivers v. National Marine Fisheries Serv., 126 F.3d 1118, 1122 n. 7 (9th Cir.1997).

When formal consultation is required under section 7, NMFS, as the "consulting agency," must provide "a written statement ... detailing how the agency action affects the species or its critical habitat" to the federal agency at issue (also referred to as the

"action agency"). 16 U.S.C. § 1536(b)(3)(A); see 50 C.F .R. § 402.14 (formal consultation is required if an action ***1159** might affect a listed species or critical habitat). This written statement is referred to as a Biological Opinion ("BiOp"). If the BiOp concludes that jeopardy or adverse modification exists, NMFS must suggest reasonable and prudent alternatives ("RPAs") that it believes would not violate section 7(a)(2) and that can be implemented by the action agency. 16 U.S.C. § 1536(b)(3)(A). In addition, if NMFS concludes that no jeopardy exists or that RPAs would avoid jeopardy and that the incidental taking of endangered or threatened species will not violate section 7(a)(2), NMFS must issue an Incidental Take Statement specifying the conditions under which incidental taking may occur. 16 U.S.C. § 1536(b)(4).

**B. Litigation Over Earlier Biological Opinion**

The competing environmental and economic interests associated with FCRPS operations have spawned years of litigation. The present action follows a series of decisions and BiOps dealing with salmon and FCRPS operations. In 1992, in an effort to assist the downstream migration of juvenile salmon, the Corps and the Bureau increased water flows through the system to augment the velocity of the river and create water spills at the dams. This approach engendered considerable debate as to its efficacy and economics.

Following the 1992 decision to increase water flows, several power purchasers, including the DSIs, unsuccessfully challenged two related "no jeopardy" BiOps issued by NMFS. Pacific N.W. Generating Co-op. v. Brown, 38 F.3d 1058 (9th Cir.1994). The DSIs argued that the 1992 BiOps failed to consider the impact of harvesting on the listed species and were not based on the best scientific and commercial evidence. Id. at 1061. While that case was pending, NMFS issued another "no jeopardy" BiOp concerning FCRPS operations for 1993 (the "1993 BiOp"). The district court disapproved of NMFS's 1993 BiOp in Idaho Dep't of Fish & Game v. National Marine Fisheries Serv., 850 F.Supp. 886 (D.Or.1994), vacated as moot, 56 F.3d 1071 (9th Cir.1995).

In the meantime, however, NMFS had issued another "no jeopardy" BiOp regarding FCRPS operations for the years 1994

through 1998 (the "1994 BiOp"). The 1994 BiOp contained the same errors the district court had identified in the 1993 BiOp. As a result of the district court's decision in Idaho, NMFS reinitiated consultation and subsequently issued a BiOp for 1995 and future years (the "1995 BiOp"). The 1995 BiOp superseded the 1994 BiOp and is the BiOp at issue here.

**C. The 1995 Biological Opinion and the BPA's 1995 Record of Decision**

In contrast to the previous BiOps, the 1995 BiOp concluded that the operation of the FCRPS jeopardizes the continued existence of the listed salmon and adversely modifies their critical habitat. Before reaching this conclusion, NMFS participated in a series of discussions with two groups formed to assist the federal consulting and action agencies in complying with the district court's judgment in Idaho: (i) the Biological Requirements Work Group ("BRWG"), and (ii) the Actions Work Group ("AWG"). [FN4] These groups were composed for the most part of the parties to Idaho, including the BPA. The BRWG and AWG began meeting shortly after the Idaho court issued its decision in *1160 the spring of 1994 and continued discussions throughout the summer and fall.

> FN4. Several DSIs subsequently brought suit, claiming that the BRWG and AWG were "advisory committees" subject to and acting in violation of the Federal Advisory Committee Act. Aluminum Co. of Am. v. National Marine Fisheries Serv., 92 F.3d 902 (9th Cir.1996). We disagreed, holding that the BRWG and AWG were not groups "formed by, at the prompting of, or solely for" the federal government, but rather were created "for the purpose of aiding compliance with the district court's order." Id. at 905. In the action now before us, the DSIs renew their complaints about the BRWG and AWG. Their arguments about the allegedly secret procedure used for recovery planning are specific to NMFS, which is not a party to this action, and are therefore not properly before us.

In January 1995, following a coordinated effort, NMFS and the U.S. Fish and Wildlife Service (the "FWS") issued separate draft BiOps concerning FCRPS operations, and solicited comments. In

February 1995, the BPA, along with several other entities, submitted written comments and participated in meetings regarding the draft BiOps. This joint effort culminated in March 1995 with NMFS's issuance of its final 1995 BiOp, in which it recommended a multi-part RPA for avoiding jeopardy. The RPA consisted of immediate and intermediate/long term actions, including plans for further study.

The Corps and the Bureau formally adopted the 1995 BiOp shortly after its issuance. At the same time, the BPA issued the 1995 ROD, documenting its "decision to participate with [the Corps] and [the Bureau] to operate the Federal Columbia River Power System ... for 1995 and future years consistent with these alternatives [suggested by NMFS and the FWS [FN5]] and the measures in the incidental take statements." The DSIs now petition for review of the BPA's 1995 ROD.

> FN5. The DSIs have raised no issues involving the FWS's BiOp or its adoption by the BPA.

**II. Scope and Standard of Review**

[1] The DSIs advance arguments targeted at both NMFS's actions in preparing the 1995 BiOp and the BPA's decision to adopt NMFS's "jeopardy" finding and RPA. The former claims, at least as they challenge the analysis of NMFS, which is not a party to this action, are beyond the scope of our review on a petition under 16 U.S.C. § 839f(e)(5). On similar procedural facts, we previously held that attacks on the consulting agency's actions "misse[d] the mark." Pyramid Lake Paiute Tribe of Indians v. United States Dep't of the Navy, 898 F.2d 1410, 1415 (9th Cir.1990). In Pyramid Lake, an Indian tribe challenged a BiOp adopted by the Department of the Navy but issued by the FWS, which was not a party to the action. We refused to consider whether the FWS had in any way violated the Endangered Species Act, stating:

> The Tribe argues at length that the FWS's biological opinions which contain the "no jeopardy" findings are based on faulty analysis.... The Tribe's argument misses the mark, however, because the FWS is not a party to this action. The FWS's actions, or lack thereof, in preparing its opinions are relevant on appeal only to the extent that they demonstrate whether the

Navy's reliance on the reports is "arbitrary and capricious." Id.

[2] The DSIs' other challenge, involving the BPA's 1995 ROD, presents a threshold question concerning the extent to which a federal action agency may rely on a consulting agency's finding of jeopardy under the Endangered Species Act. The DSIs urge us to set aside the 1995 ROD on grounds that the BPA should have conducted an independent analysis and concluded that the operation of the FCRPS did not jeopardize the continued existence of the listed salmon. This approach is antithetical to our established standards of review.

[3][4] The Administrative Procedure Act ("APA") governs judicial review of administrative decisions involving the Endangered Species Act. Pyramid Lake, 898 F.2d at 1414. Likewise, the APA applies to judicial review of final actions of the BPA Administrator. 16 U.S .C. § 839f(e)(2). Under the APA, we have authority to "hold unlawful and set aside agency action ... found to be arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law." 5 U.S.C. § 706(2)(A). Our review under this standard is narrow and we cannot substitute our judgment for that of the agency, particularly when "the challenged decision implicates substantial agency expertise." *1161 Mt. Graham Red Squirrel v. Espy, 986 F.2d 1568, 1571 (9th Cir.1993).

We have previously addressed situations in which a consulting agency has issued a "no jeopardy" opinion and the action agency has adopted it. Although no bright line emerges from those cases, we have concluded that an action agency may not escape its responsibility under the Endangered Species Act by simply rubber stamping the consulting agency's analysis. See Resources Ltd., Inc. v. Robertson, 35 F.3d 1300, 1304 (9th Cir.1994); Pyramid Lake, 898 F.2d at 1415 ("A federal agency cannot abrogate its responsibility to ensure that its actions will not jeopardize a listed species...."). On the other hand, we have held that an action agency need not undertake a separate, independent analysis in the absence of new information not considered by the consulting agency in reaching its "no jeopardy" conclusion. See Stop H-3 Ass'n v. Dole, 740 F.2d 1442, 1460 (9th Cir.1984). Finally, we

have upheld an action agency's adoption of a "no jeopardy" finding even when based on admittedly "weak" best available evidence. See Greenpeace Action v. Franklin, 14 F.3d 1324, 1336 (9th Cir.1993).

In contrast, we now face a situation in which the consulting agency has issued a "jeopardy" finding. In consideringthe nature of our review of the action agency's adoption of the "jeopardy" determination, we are guided by the Supreme Court's decision in Bennett v. Spear, 520 U.S. 154, 117 S.Ct. 1154, 137 L.Ed.2d 281 (1997). In Bennett, the Court observed that when a consulting agency issues a "jeopardy" opinion, its decision has a "powerful coercive effect." Id. at 169. The Court warned that an action agency disregards a "jeopardy" finding "at its own peril," and bears the burden of articulating in its administrative record the reasons for reaching the opposite result. Id. at 169-70. Acknowledging the expertise of a consulting agency, the Court explained that an action agency "runs a substantial risk if its (inexpert) reasons turn out to be wrong.... for 'any persona' [including an agency employee] who knowingly 'takes' an endangered or threatened species is subject to substantial civil and criminal penalties, including imprisonment." Id. (citing 16 U.S.C. § 1540).

In light of the action agency's obligations and risks as underscored by the Supreme Court, we decline the DSIs' invitation to scrutinize the BPA's adoption of NMFS's "jeopardy" finding more critically than we would an action agency's reliance on a consulting agency's "no jeopardy" opinion. To the extent the DSIs seek to impose on the adoption of a "jeopardy" determination a higher evidentiary burden than that applied with respect to a "no jeopardy" finding, such attempt is contrary to the purposes and spirit of the Endangered Species Act. See 16 U.S.C. §§ 1531(a)(3), (b), & (c). Likewise, we will not require that an action agency reinvent the wheel and conduct an independent jeopardy analysis when nothing more is offered than evidence and arguments already considered by the consulting agency. Review under the APA's arbitrary and capricious standard is well developed in our precedent and we see no reason to refine it further here.

## III. Review of the BPA's 1995 ROD

The DSIs argue that the 1995 ROD does not pass muster under the APA because the "jeopardy" finding is not supported by appropriate data and is based on a flawed standard. Neither argument has merit. Similarly, the applicable statutes do not support the DSIs' contention that the BPA's adoption of NMFS's suggested RPA contravenes its obligation to provide economical power.

### A. The "Jeopardy" Finding and the RPA

[5] We view the DSIs' challenges as reflecting primarily a difference of opinion among experts concerning the cause of the listed species' decline and the appropriate methods for improving their chances for survival. As the BPA itself recognized, "there are different views among scientists *1162 regarding what measures are most appropriate to benefit listed salmon." Such disagreement does not establish a lack of adequate foundation for the conclusions reached in the 1995 BiOp or the BPA's decision to adopt it. See Marsh v. Oregon Natural Resources Council, 490 U.S. 360, 378, 109 S.Ct. 1851, 104 L.Ed.2d 377 (1989) ("When specialists express conflicting views, an agency must have discretion to rely on the reasonable opinions of its own qualified experts even if, as an original matter, a court might find contrary views more persuasive.").

While cloaking their challenge in terms of the obligation to use "the best scientific and commercial data available," the DSIs' arguments are essentially an effort to rehash the multi-year scientific debate that culminated in the adoption of the 1995 BiOp. Two examples underscore this point. First, the DSIs express dissatisfaction with the proposal to increase flow, employ spill, and reduce transportation, raising oft-repeated concerns about spill-related disease in the fish, and accusing NMFS of ignoring data demonstrating the efficacy of smolt transportation. Far from disregarding relevant scientific information, however, NMFS engaged in a detailed analysis of these issues and weighed the available data.

Second, the DSIs take issue with the choice NMFS made between competing computer models, but again, the DSIs do no more than

present a dispute previously resolved by the expert agency. In fact, the DSIs' complaint appears unfounded because NMFS expressly placed "greater weight" on the results of the Columbia River Salmon Passage ("CRiSP") computer model preferred by the DSIs. The BPA separately documented its analysis of the computer modeling and biological data, and ultimately concluded that the CRISP model coupled with another model provided the best available quantitative assessment of the factors affecting juvenile survival and long-term population trends of the listed species.

[6] Although the BPA itself quarreled with some of NMFS's conclusions, in the end, the BPA determined that NMFS's overall approach, which emphasized further research and monitoring, was reasonable and responsible. The DSIs now invite us to second-guess the BPA's final decision. We decline to do so. Rather, on this record, which reflects scientific uncertainty and differing scientific views resolved in part by expert choices and in part by commitments for further study, we cannot say the BPA acted arbitrarily, capriciously, or contrary to law in adopting NMFS's "jeopardy" finding [FN6] or multi-part RPA. See Southwest Ctr. for Biological Diversity v. United States Bureau of Reclamation, 143 F.3d 515, 523 (9th Cir.1998) ("The Secretary was not even required to pick the best alternative or the one that would most effectively protect the [listed species] from jeopardy.").

> FN6. We are unpersuaded by the DSIs' argument that NMFS applied a flawed jeopardy standard. NMFS correctly stated the statutory standard and appropriately considered the effect of future FCRPS operations within the context of other existing human activities that impact the listed species, including incidental harvesting. See 50 C.F.R. § 402.02 ("The environmental baseline includes the past and present impacts of all ... other human activities in the action area...."). In addition, NMFS correctly viewed incremental improvements as insufficient to avoid jeopardy in light of the already vulnerable status of the listed species. We agree with NMFS that the regulatory definition of jeopardy, i.e., an appreciable reduction in the

likelihood of both survival and recovery, 50 C.F.R. § 402.02, does not mean that an action agency can "stay the course" just because doing so has been shown slightly less harmful to the listed species than previous operations. Here, the species already stands on the brink of extinction, and the incremental improvements pale in comparison to the requirements for survival and recovery. Finally, we find no fault with the method in which NMFS included in the jeopardy calculus the listed species' potential for recovery.

**B. Balancing Economic Interests**

[7] The DSIs also assert that the BPA failed to balance appropriately its obligations ***1163** under the Endangered Species Act against the Northwest Power Act's directive to "assure the Pacific Northwest of an adequate, efficient, economical, and reliable power supply." 16 U.S.C. § 839(2). The Northwest Power Act's goal of providing economical power, however, does not supplant the BPA's obligation to comply with environmental mandates. We previously examined the history of the Northwest Power Act and identified several "innovations" that must enter into the BPA's calculus, including: (i) requiring consistent construction with other statutes "specifically including environmental laws"; (ii) shifting the focus in wildlife mitigation from "merely creating substitute resources, such as salmon hatcheries, to emphasizing changes in hydro project operations"; (iii) lowering the burden of proof for undertaking remedial action by requiring only the "best available scientific knowledge" rather than "scientific certainty"; and (iv) favoring "biological outcomes over economic ones." Northwest Resource, 35 F.3d at 1378.

In addition, the DSIs' argument ignores the imperative nature of the Endangered Species Act. See 16 U.S.C. § 1536(a)(2) ("Each Federal agency shall ... insure that any action ... is not likely to jeopardize...." (emphasis added)). Contrary to the DSIs' contention, the BPA cannot disregard its duties under the Endangered Species Act. Given the factors it must weigh, the BPA cannot be said to have struck an improper balance between salmon and economical hydropower.

## IV. Environmental Impact Statement

[8][9] The DSIs contend that the BPA violated the National Environmental Policy Act 5 ("NEPA") by failing to prepare an environmental impact statement ("EIS") before issuing the 1995 ROD. [FN7] The BPA responds that the final EIS issued by the Corps, the Bureau, and the BPA in November 1995 renders the DSIs' claim moot. The BPA is correct. An action is moot if "no actual or live controversy exists," for example, when we cannot grant effective relief. Cook Inlet Treaty Tribes v. Shalala, 166 F.3d 986, 989 (9th Cir.1999). The DSIs' complaints are stale because a final EIS was prepared and we can grant no relief that would "undo" the operation of the FCRPS during the period between issuance of the 1995 ROD and the final EIS. [FN8]

> FN7. NEPA mandates that all federal agencies "include in every recommendation or report on proposals for ... major Federal actions significantly affecting the quality of the human environment, a detailed statement ... on the environmental impact of the proposed action." 42 U.S.C. § 4332(2)(C)(i).
>
> FN8. The DSIs assert in their reply brief that their claims are not moot because the alleged problems with an earlier EIS were carried over to the final EIS. The DSIs inappropriately raise a new argument in their reply. See Martinez-Serrano v. INS, 94 F.3d 1256, 1259 (9th Cir.1996), cert. denied, --- U.S. ----, 118 S.Ct. 49, 139 L.Ed.2d 15 (1997).

The petition for review is DENIED.

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UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

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| ALUMINUM COMPANY OF AMERICA, et al., | ) | No. 95-70480 |
| Petitioners, | ) | |
| vs. | ) | ORDER |
| BONNEVILLE POWER ADMINISTRATION, | ) | |
| Respondent. | ) | |

Petitioners' motion to complete and supplement the record is referred to the merits panel for disposition.

FOR THE COURT:

/S/ David E. Lombardi, Jr.

David E. Lombardi, Jr.

Chief Court Mediator

NOT FOR PUBLICATION
UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

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| ALUMINUM COMPANY OF AMERICA, COLUMBIA ALUMINUM CORPORATION, COLUMBIA FALLS ALUMINUM COMPANY, ELF ATOCHEM NORTH AMERICA, INC., INTALCO ALUMINUM CORPORATION, KAISER ALUMINUM & CHEMICAL CORPORATION, NORTHWEST ALUMINUM COMPANY, REYNOLDS METALS COMPANY, and VANALCO, INC., | ) | No. 95-70480 |
| Petitioners, | ) | |
| vs. | ) | |
| ADMINISTRATOR, BONNEVILLE POWER ADMINISTRATION, | ) | ORDER |
| Respondent. | ) | |

BEFORE: LEAVY, McKEOWN, and WARDLAW, Circuit Judges.

The Court grants in part, and denies in part, the petitioners' motion to complete and supplement the record. The request to treat the three affidavits submitted to the district court in Idaho Dep't of Fish & Game v. National Marine Fisheries Serv., 850 F. Supp. 886 (D.Or. 1994), as part of the administrative record is granted. The petitioners' motion is denied in all other respects.

The respondent's request for leave to file the 1995 Columbia

River Systems Operations Review Final Environmental Impact Statement, including the two additional pages provided by the petitioners, and the 1997 Record of Decision issued thereon is granted.

ENDANGERED SPECIES ACT

RECORD OF DECISION

Regarding

BIOLOGICAL OPINIONS

by the

NATIONAL MARINE FISHERIES SERVICE

and

US FISH AND WILDLIFE SERVICE

on

OPERATION

of the

FEDERAL COLUMBIA RIVER POWER SYSTEM

in

1995 AND FUTURE YEARS

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RECORD OF DECISION

## I. INTRODUCTION

### A. DESCRIPTION OF THE ACTION

The Bonneville Power Administration (BPA), the Army Corps of Engineers (COE), and the Bureau of Reclamation (BOR) coordinate operation of the FCRPS. The FCRPS consists of the various Federal hydroelectric projects in the Columbia and Snake Rivers. Operation of the FCRPS entails coordinated operation of these projects, including developments and implementation of various agreements used to plan for operation of the FCRPS, to actually operate the FCRPS, and to coordinate operations with Canada and utilities in the Pacific Northwest. Examples include: (1) implementation of the Columbia River Treaty (Treaty) between the United States and Canada, such as by adoption of assured operating plans and detailed operating plants, (2) arrangements with Canada for Non-treaty storage, and (3) renewing and revising the Pacific Northwest Coordination Agreement.

### B. ENDANGERED SPECIES ACT RESPONSIBILITIES

Pursuant to the Endangered Species Act (ESA), National Marine Fisheries Service (NMFS) and Fish and Wildlife Service (FWS) have listed several species potentially affected by operation of the FCRPS. NMFS has listed Snake River sockeye, Snake River spring/summer chinook, and Snake River fall chinook as endangered species. FWS has listed four Snake River snail species, Kootenai River white strugeon, the grey wolf, and peregrine falcon as endangered species, and one Snake River snail species, the grizzly bear and Pacific Northwest bald eagle population and threatened species.

The ESA requires Federal agencies, in consultation with NMFS and FWS, to insure that their actions are not likely to jeopardize the continued existence of listed species and to utilize their authorities to further the proposes of the ESA by carrying out

programs for the conservation, or recovery, of listed species.[1] The ESA also proscribes take of these species, unless such take is consistent with an incidental take statement or permit issued by NMFS or FWS.[2]

### C. Process Leading to New NMFS B.O.

#### 1. Reconsideration of NMFS 1994-1998 B.O

In Idaho Department of Fish and Game v. NMFS, Civ. No. 92-973-MA (Lead Case) and consolidated cases (D.Or.), the Idaho Department of Fish and Game, State of Oregon and four treaty Indian tribes challenged the legal adequacy of NMFS' 1993 B.O. on FCRPS operations. In an opinion dated March 28, 1994, Federal District Court Judge march set aside the 1993 B.O. and instructed the Federal defendants to review and reconsider it. Because the period covered by the 1993 B.O had passed, and NMFS had just issued a new B.O. for the years 1994-1998, the Federal defendants chose, wtht he court's approval, to review and reconsider the 1994-1998 B.O. instead.

#### 2. Extensive Consideration of State, Tribal, and Other Views

The Federal defendants futher chose to engage in an extensive process of meetings and discussions with Federal, State, tribal and non-governmental participants in the Idaho Dept. of Fish and Game v. NMFS litigation to consider and develop new information and approaches for avoiding jeopardy to the listed fish and for facilitating their recovery. A list of these participants follows.

| Federal | States | Tribes | Utilities & Industries |
|---|---|---|---|
| NMFS | Alaska | Colville Confederated Tribes | Aluminum Co. of America |
| FWS | Idaho | Makah Tribe | Elf Atochem North America |

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[1] 16 U.S.C. § 1536(a).
[2] 16 U.S.C. §§1536(o), 1538, 1539.

| | | | |
|---|---|---|---|
| COE | Oregon | Nez Perce Tribe | Columbia Falls Aluminum Co. |
| BOR | Montana | Quinault Indian Nation | Kaiser Aluminum & Chemical Corp. |
| BPA | Washington | Umatilla Tribes | Intalco Aluminum Co |
| Dept of Commerce | | Warm Springs Tribe | Northwest Aluminum Co. |
| Dept of the Interior | | Yakima Nation | Oregon Metallurgical Corps. |
| | | | Reynolds Metals Co. |
| | | | Intermountain Forest Industries Association |

Environmental Groups

| | | |
|---|---|---|
| American Rivers | Federation of Fly Fishers | Oregon Natural Resources Council |
| Boulder-White Clouds Council | Idaho Rivers United | Salmon for All |
| Coalition for Idaho Water | Idaho Salmon & Steelhead United | Sawtooth Wildlife Council |
| | Northwest Resource Information Center | |

Meetings and discussions with Idaho v. NMFS participants began in June 1994 and continued into January 1995. Participants engaged in additional studies, review of models and methodologies to analyze impacts of activities upon fish, identification of

scenarios to analyze with models, analyses of scenarios with the models, additional analyses, and reports on biological parameters and possible actions. On December 15, 1994, prior to continuing formal consultation on FCRPS operations, the action agencies submitted to NMFS a supplemental biological assessment on FCRPS operations and made it available to the public.

On January 25, 1995, NMFS issued a draft biological opinion for 1995 and future years and solicited written comments on the draft from the Idaho v. NMFS participants by February 10, 1995. In addition to receiving written comments, later in February, NMFS met with various groups to hear their oral comments.

These meetings and discussion are more fully described in NMFS B.O. for 1995 and future years and in the Federal Defendants' reports to the court.

**3. Consultation**

While considering the views of states, tribes and non-governmental participants in the Idaho v. NMFS litigation, NMFS and the FCRPS action agencies renewed formal consultation on FCRPS operations. On December 15, 1994, the FCRPS action agencies submitted to NMFS a supplement to their 1994-1998 Biological Assessment (B.A.). The supplement to the B.A. addressed future operation of the FCRPS and potential impacts upon listed species. The action agencies also made this document available to the public.

Beginning in mid-January, NMFS and the action agencies engaged in a series of meetings, discussions, review of opinions and information provided by Idaho v. NMFS participants, and exchanges of information. NMFS and the action agencies considered various possible actions to avoid jeopardy to fish and further enable their recovery.

To provide an additional opportunity for consideration of all viewpoints, NMFS solicited comment on its January 25, 1995, draft B.O from Idaho v. NMFS participants. By February 10, 1995, BPA and other entities submitted comments.

Formal consultation culminated with issuance by NMFS of a final B.O on March 2, 1995.

#### 4. 4. NMFS Final B.O.

On March 2, 1995, NMFS issued its final B.O. regarding operation of the FCRPS and Juvenile transportation Program in 1995 and Future Years (1995+ B.O.). The B.O. recommends an alternative for avoiding jeopardy.

### D. Process Leading to New FWS B.O.

#### 1. Reconsultation on FWS 1994-1998 B.O.

The FWS B.O. was not challenged in the Idaho v. NMFS litigation. However, because the FCRPS is operated as an integrated system, any modifications to system operations resulting from the reconsultation on FCRPS operations with NMFS needed to be coordinated with the needs of species listed by the FWS. In addition, the Kootenai River white sturgreon which ahd been proposed for listing when the FWS issued its B.O./Conference Opinion on 1994-1998 FCRPS Operations on July 27, 1994, had been listed as an endangered species on Spetmeber 6, 1994[3], thereby necessitating a B.O.

On December 15, 1994, the FCRPS action agencies submitted a supplement to their 1994-1998 B.A. to FWS. The Supplemental B.A. addressed future operation of the FCRPS and potential impacts upon listed species. In order to fully integrate the FWS reconsultation with the NMFS consultation process described above, the action agencies also made this document available to the public.

Beginning in mid-December, FWS and the action agencies formally consulted by engaging in a series of meetings and exchanges of information. NMFS participated in some of the meetings to enable analysis of the impacts of various actions to be coordinated between FWS and NMFS. FWS and the action agencies considered how the proposal to operate the FCRPS as described in the Supplemental B.A.. could avoid jeopardy to the Kootenai river white sturgeon and Snake River snails. To provide an additional opportunity for consideration of other viewpoints, FWS solicited comment on its January 25, 1995, draft B.O. from

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[3] 59 Fed. Reg. 45989.

affected State management agencies. FWS issued its final B.O. on March 2, 1995. The new B.O. addressed the effects of FCRPS operations in 1995 and future years on four species of Snake River snails and the Kootenai River white sturgeon.

**2. Effects on Other Species.**

The July 27, 1994, B.O. on the effects of FCRPS operations on bald eagles remains in effect. FWS concurred with the conclusion of the action agencies that the proposed action is not likely to adversely affect the gray wolf, grizzly bear or pregrine falcon, and will have no effect on the Banbury Springs lanx (a listed Snake River snail).

**E. Environmental Impact Analyses**

Since NMFS listed species of salmon in 1991 and 1992, and FWS listed the Snake River snails in 1992 and the Kootenai River white sturgeon in 1994, the action agencies have conducted environmental analyses of the impacts of FCRPS operations. The action agencies performed these analyses in accordance with the national Environmental Policy Act (NEPA).

In 1992 the action agencies issued a final Columbia River Salmon Flow Measures Options Analysis/Environmental Impact Statement. This EIS addressed flow improvement measures that could be implemented in 1992. In 1993 the action agencies produced the final Columbia and Snake Rivers Flow Improvement Measures for Salmon Supplemental Environmental Impact Statement (SEIS). This SEIS evaluated water management actions implementable in 1993 and subsequent years.

The action agencies are no completing their Columbia River System Operation Review (SOR), an environmental analysis of a wide range of possible longer-term changes in operations of the FCRPS. The action agencies issued a draft SOR EIS in July 1994 and plan to issue the final SOR EIS in the summer of 1995.

The COE is also conducting the Columbia River System Configuration Study, a long-term study of structural alternatives to improve salmon migration conditions. Options under analysis include drawdown of the four lower Snake River reservoirs.

## II. RECOMMENDATIONS OF NMFS AND FWS BIOLOGICAL OPINIONS

### A. NMFS Biological Opinion

The NMFS B.O. on FCRPS Operations for 1995 concluded that operation of the FCRPS for the remainder of the 1994-1998 B.O., without additional activities consistent with NMFS' proposed Recovery Plan and provision for longer-term changes, failed to avoid jeopardy to the listed species.[4] To avoid jeopardy, NMFS recommended a comprehensive alternative.[5] The alternative includes immediate and intermediate term actions to improve survival as well as immediate research, evaluation and enginnering studies to improve survival in the intermediate and long term.

The immediate actions to improve in-river survival include increases in flows and spill, lowering of the lower Snake River reservoirs to near minimum operating pool, and lowering of John day reservoir to near minimum irrigation pool. The intermediate term actions to improve survival include improvements in juvenile bypass systems and gas abatement programs.

The alternative emphasizes research, evaluation and engineering studies to improve survival in the intermediate and long term during the migration of fish. The alternative delineates a process for using information gathered from these studies to select one of three major long term changes to the FCRPS: (1) passage improvements at dams, such as surface collectors, that significantly improve bypass and/or collection efficiency, (2) a spillway crest drawdown at the lower Snake River projects, or (3) a natural river drawdown at the lower Snake River projects.

### B. FWS Biological Opinion

The FWS B.O. describes operations to regulate flows at Libby Dam for 1995 and 1996-1998. Regulation of flows is to be consistent with existing treaties and laws.[6] Operations for 1995 are

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[4] 1995+ B.O. at Part VIII.

[5] 1995+ B.O. at Part VIII.

[6] BPA notes that the Government of Canada, by Diplomatic Note of January 12, 1995, has objected to operation of Libby Dam to provide

more limited than those described for 1996-1998 due to time required to repair a turbine at the dam. Monitoring and evaluation activities to monitor sturgeon movements, spawning, egg deposition, fry production and recruitment are set forth in the measures, terms and conditions of the incidental take statement.

## III. DECISIONS

The Biological Opinions issued March 2, 1995 by NMFS and FWS recommend implementation of alternatives for avoiding jeopardy and implementation of measures in incidental take statements. This Record of Decision (ROD) documents BPA's decision to participate with the COE and BOR to operate the Federal Columbia River Power System (FCRPS) for 1995 and future years consistent with these alternatives and the measures in the incidental take statements. BPA makes this decision in order to satisfy its responsibilities under the ESA consistent with its authorities and responsibilities under other statutes and applicable law. The source of BPA's authority is the Pacific Northwest Power Planning and Conservation Act and related enabling statutes. This ROD constitutes a final action of the BPA Administrator taken pursuant to the Northwest Power Act.

In addition to recommending immediate and intermediate actions to benefit listed salmon, the NMFS B.O. delineates a process of study, monitoring and evaluation leading to selecting longer-term options for FCRPS operations.[7] BPA's objective is to select one of the options identified by the B.O., subject to timely consideration in the SOR and other environmental processes.[8]

## IV. CHANGES FROM "STATUS QUO'

The FCRPS operations to be implemented pursuant to this decision substantially change operation of the reservoirs in the FCRPS compared to prior biological opinions, and especially compared to operations prior to the listing of Snake River sockeye in 1991. The

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flows for fish during the May – June period and has requested Consultations with the United States pursuant to Article XII of the Columbia River Treaty.

[7] See Part II.A of this ROD.

[8] See part I.E of this ROD.

action agencies have continuously increased their commitment in terms of flow augmentation, spill, drafting of reservoirs, structural changes, and research, monitoring, and evaluation. The matrix entitled "Comparison of Measures in the 1992 Biological Opinion, 1993 Biological Opinion, 1994-1998 Biological Opinion and 1995 Biological Opinion" summarizes changes in FCRPS operations under successive biological opinions.[9]

These changes have caused BPA to incur tremendous costs both in terms of expenditures and in lost revenues. The table entitled "1995 Biological Opinion Costs to BPA" estimates these costs.[10]

## V. RATIONALE FOR DECISION RESPECTING NMFS B.O.

### A. Resolution of Uncertainties and Different Views

BPA recognizes, and the record demonstrates, that there are different views among scientists regarding what measures are most appropriate to benefit listed salmon. As described above, the action and consulting agencies engaged in extensive discussions, meetings, and review of information with scientists and representatives expressing the full spectrum of opinions. As expressed in this ROD, and based upon its biological analyses and review of the science, BPA believes a different set of actions could more effectively satisfy responsibilities under the ESA. However, the actions in NMFS' alternative provide benefits to fish that can enable these fish to reach survival levels and maintain the potential for recovery. In addition, by emphasizing research, monitoring, and evaluation, NMFS provides a responsible approach for better ascertaining benefits to the listed species, reducing uncertainties, and resolving different views. BPA agrees that this analysis over the next few years is essential to reasoned decisionmaking on longer term operations and structural changes. NMFS' alternative, therefore, is a reasonable one for avoiding jeopardy to and facilitating recovery of the listed salmon species.

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[9] See Appendix A.

[10] See Appendix B. BPA based these estimates on information available as of February 28, 1995, and expects to refine them as it studies the final NMFS 1995+ B.O. issued on March 2, 1995.

**B. Collective and Interdependent Effort to Reach Survival Escapement Levels**

Improved spawning escapements of the listed fish are heavily dependent upon improvements by all actions affecting any of the various stages of the species' life cycles (habitat, hydro, hatcheries, and harvest). As long as a species is below levels needed for survival, improved benefits to the listed fish by all actions is critical to avoiding jeopardy. NMFS recognizes this interrelationship by calling for consistency by all actions with its proposed recovery plan.

**C. Summary of Biological Analyses**

BPA's own analysis shows that the improvements possible under NMFS' alternative, together with improvements by other actions affecting the listed species, are sufficient to enable positive trends in spawning escapement.

**1. Biological Modeling**

A wide array of operational alternatives identified through the Idaho v. NMFS settlement negotiations and additional consultations with NMFS on future FCRPS operations were analyzed relative to fish survival and recovery with the Columbia River Salmon Passage Model (CRiSP) and the Stochastic Life Cycle Model (SLCM). The CriSP model provides estimates of juvenile passage survival and was developed by the Center for Quantitative Science, University of Washington. The SLCM provides estimates of spawning escapement trends and was developed by Dr. Danny lee (U.S. Forest Service, Inter-mountain Research Station, Forestry Sciences Laboratory, Boise, Idaho) and Dr. Jeffrey Hyman (Quality of the Environment Division, Resources for the Future, Washington, DC). Together these models provide a quantitative assessment of the many actions and environmental factors that combine to affect the juvenile survival and long-term population trends of the ESA listed Snake River salmon stocks. Our review of regional analytical tools has found these models to be the best available and the only models available with adequate documentation and public access. The data used in these model analyses are also believed to be the best currently available. NMFS's review of the stimulation capabilities of the

regional passage models and available research for spring chinook showed that the CriSP model resultes should be given more weight than the state and Tribal model results.

A more detailed documentation of the models, the biological data, and the modeling analyses performed for this assessment is provided in a separate document entitled "Biological Modeling Analyses of Alternatives Considered in The Record of Decision on Endangered Species Act Biological Opinions on Operation of the Federal Columbia River Power System", BPA 1995. Additional information on the modeling analyses provided to NMFS during consultations is documented in "Life-Cycle and Passage Model Analyses Considered in Evaluating Effects of the Actions During Reinitiation of Consultation on the Biological Opinion on 1994-19998 Operation of the Federal Columbia River Power System", NMFS 1995. Documentation for the CriSP and SLCM models is provided in "Columbia River Salmon passage Model, CriSP 1, Documentation for Version 5" Anderson et al 1995 and "SLCM: A Tool For Simulating The Population Dynamics of Anadromous Salmonids" Lee and Hyman 1992.

The results of this assessment show that both the 1994-98 BO Operations and the 1995 NMFS Draft BO – Option 1 alternatives[11], which provide a combination of additional flow augmentation, spill, modifications to fish bypass systems, and improvements in fish transportation, can result in major improvements in juvenile fish survival. Both of these alternatives provide approximately the same levels of survival improvements which were significantly higher than all other alternatives analyzed. The average juvenile survival in the years 1995 and 2003 increases by approximately 25 and 50 percent respectively for spring chinook and 90 and 190 percent respectively for fall chinook relative to the average survival during the environmental baseline years of 1975 through 1993. These juvenile passage improvements in combination with some minor changes in habitat, hatchery, and harvest impacts show substantial increases in spawning escapement trends toward recovery levels and increasing probabilities of being above critically low population levels for the

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[11] NMFS 1995+ B.O. at part VIII.B; NMFS 1994-1998 B.O.

Snake River spring, summer and fall chinook ESUs and the majority of the spring and summer chinook indicator stocks. Although sockeye were not explicitly analyzed in this assessment, they would be expected to have similar juvenile survival improvements as those projected for spring chinook.

This assessment found substantially lower survival improvements for reservoir drawdown alternatives such as the 1995 BO – Options 2 and 3.[12] In many cases these options resulted in even lower survival levels than the environmental baseline conditions. In addition to low survivals and population trends, these drawdown options also showed the potential for catastrophic adverse impacts to the listed stocks.

The assessment of alternatives also shows that measures that reduce fish transportation levels such as increasing spill at fish transportation projects and elimination of transportation at McNary are likely to reduce juvenile survival. The existing biological data and modeling analyses supports continued and expanded levels of fish transportation. Monitoring and evaluation efforts should help clarify uncertainty regarding the most effective fish passage routes. BPA believes that Option 1 in NMFS' alternative should include consideration of increased levels of transportation at all existing projects, the addition of transportation at other projects, and transportation to the estuary.

**2. Additional Beneficial Actions**

In addition to the actions modeled, BPA provides funding for a wide array of actions contained in the NPPC's Columbia River Basin Fish and Wildlife Program. Other activities by BPA, the action agencies and others continue to provide improvement for fish passage and survival. Funded under the Council's Program are projects such as spawning habitat improvement, application of fish disease research, and supplementation. BPA and others are also working to benefit the listed populations through the inseason management process, optimizing river operations for timing of active fish movement, turbine peak efficiency and facility improvement measures such as fish ladder temperature control.

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[12] NMFS 1995+ B.O. at part VIII.B.

Benefit quantification for these activities is inexact, but BPA and the region, through the Council's Implementation Planning Process, believes benefits are realized by the weak and listed salmonid populations.

The NMFS proposed framework for adaptive management and monitoring and evaluation will help the region quantify benefits for some of these activities, while others will remain unevaluated. We continue to support a strong, objective adaptive management program based on sound science.

### 3. Biological Analysis Conclusions

BPA concludes that the alternative described in the NMFS B.O. avoids jeopardy to and facilitates the recovery of listed salmon based on the substantial improvements in juvenile survival and increasing population trends. This conclusion is further supported by the significant number of recovery measures that were not included in the modeling analyses making this a conservative assessment. In addition, the emphasis on monitoring and evaluation sets a framework for continuing to improve the effectiveness of operational alternatives and helps insure that we make informed adaptive management decisions if additional measures ar erequired in the future.

BPA also concludes that NMFS' alternative avoids the destruction or adverse modification of critical habitat. The analysis of whether an action jeopardizes listed species is almost identical to the analysis of whether the action adversely modifies or destroyes critical habitat.[13] During the processes leading to NMFS' final B.O., NMFS and the action agencies have considered the impacts of the alternative upon features of habitat. Their analysis of impacts upon the survival of the listed fish necessarily encompassed evaluation of impacts upon critical habitat.

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[13] See the regulatory definitions of "jeopardize the continued existence of" ("reduce appreciably the likelihood of both the survival and recovery of a listed species") and "destruction or adverse modification" ("appreciably diminshes the value of critical habitat for both the survival and recovery of a listed species") at 50 C.F.R. § 402.02.

## D. Issues Warranting Study, Monitoring and Evaluation

Adaptive management directed by monitoring and evalution forms the basis for avoiding jeopardy and achieving recovery of the listed Snake River salmon. A comprehensive life cycle ecosystem approach with a succinct decision protocol is essential for answering the critical uncertainties within the FCRPS estuary, near shore ocean and the ocean encompassing the adult range of the listed salmon. With this information the region can make the resource allocation decisions needed to best advantage the listed populations.

The NMFS BO and Draft Recovery Plan contain the framework necessary to avoid jeopardy to the listed species, promote their recovery, and base decisions upon the best available science. Although there has been much study of Snake River salmon, the species are extremely complex, and the data regarding the effects and benefits to these species is limited. Immediate concerns exist over spill and resulting gas supersaturation and its effect on fish, reservoir drawdowns that may not achieve survival improvements and limitation of transportation at McNary Dam which may decrease survival of upstream Columbia River populations.

We understand that these and other issues will be addressed by the monitoring and evaluation (M&E) and adaptive management framework provided by NMFS. The research and availability of fish for sampling should be given the highest priority so that the region can make the best decisions on the benefits of these often costly measures.

The M&E and evaluation stressed in the NMFS B.O. is also critical to determining the effectiveness of the following costly operational measures.

- Flow augmentation releases could be more effectively utilized by timing the releases coincedent with significant juvenile outmigrations. Such operations would conserve storage in low water years to provide more augmentation for summer (especially August) migrants. The opinion specifies refilling the Lower Granite pool above minimum operating pool (MOP) after November 15. Yet, it is believed that the juvenile outmigration and adult migration

are completed by the end of October. Thus, through M&E the migration timing con be confirmed and unnecessary and costly Lower Granite MOP operations can be avoided.

- Similarly, M&E can confirm the effectiveness of perating the John Day pool within a one-and-a-half foot range of minimum irrigation pool (MIP).[14] Operating John Day within this very narrow range will be a difficult operation, and may often be impossible, due to wind effects, rapid streamflow changes, and changes in spill. With M&E actual pool survival improvement could be measured, and the benefits weighed against hydro system operations flexibility.

- Further monitoring and evaluation are warranted to determine the effectiveness of operating turbines within 1% peak efficiency during adult migration. Through comprehensive monitoring and evaluation millions of dollars and millions of acre-feet of water could potentially be redirected to more optimal measures.

BPA raised additional issues in its comments on NMFS draft B.O. dated January 25, 1995.[15]

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[14] The provision regarding John Day anticipates economic mitigation from some source. However, funding for such mitigation must come from a source other than BPA: BPA lacks authority to provide such economic mitigation. August 12, 1992, Memorandum from Harvard P. Spigal, General Counsel, to Randall W. Hardy, Administrator, entitled "Legal Authority of the Bonneville Power Administrator to Fund Economic Mitigation Measures"; March 9, 1995, Memorandum from James O. Luce, Assistant General Counsel, and Philip S. Key, Attorney to R. Hardy, Administrator, entitled "Legal Authority to Fund the Extension of Pumping Facilities in the John Day Pool".

[15] Comments by the Bonneville Power Administration on the January 25, 1995, Draft Biological Opinion by the National marine Fisheries Service on Operations of the Federal Columbia River Power System for 1995 and Future Years, submitted to NMFS with a February 10, 1995, letter from Judith Johansen to William Stelle and Michael Spear.

## VI. RATIONALE FOR DECISION RESPECTING FWS B.O.

### A. SNAKE RIVER SNAILS

BPA is not now involved in operational decisions on the upper and middle Snake River and therefore has not consulted with FWS on a proposed BPA action. If BPA later actively participates in operational decisions on the middle and upper Snake River, BPA expects to consult with FWS. BPA's involvement in snail consultation and level of participation in operational decisions in the Snake River will determine BPA's level of involvement in further snail research or assessments.

### B. 1995 AND FUTURE YEARS OPERATIONS AVOIDS JEOPARDY TO KOOTENAI RIVER WHITE STURGEON

The FWS B.O. describes specific operations of Libby Dam as a reasonable and prudent alternative to the proposed action and monitoring and evaluation as measures, terms and conditions of an incidental take statement. It is BPA's opinion that implementation of these operations and performance of the described monitoring and evaluation will avoid jeopardy to the sturgeon. BPA has performed and funded analyses over the past eight years to better understand the status and life history requirements of the sturgeon and bases its opinion on these analyses.

#### 1. Status of the Species

Libby Dam was completed in 1974. At that time little was known regarding the status and life history of the Kootenai River white sturgeon (*Acipenser transmontanus*). British Columbia Ministry of Environment and Parks,[16] Idaho Department of Fish and Game (IDFG),[17] and Montana Department of Fish, Wildlife and parks (MDFWP)[18] initiated studies in the late 1970's and early 1980's to evaluate the status and life history of these sturgeon.

Population estimates were made from these studies in 1982 and 1990. They showed that during this time period the sturgeon

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[16] Andrusak 1980.
[17] Partridge 1983.
[18] Graham 1981.

population declines from an estimated 1,194 fish[19] to approximately 880 fish.[20] Only eight fish have been captured during monitoring activities since 1989 that were determined to be from post 1974 classes. Four of these fish resulted from natural spawning in the years 1976 through 1978, and four fish came from the 1991 year class. There is some uncertainty whether the fish from the 1991 year class were naturally spawned or spawned in the Kootenai Tribe of Idaho experimental sturgeon hatchery.

### 2. BPA's Research Activities

In 1988 BPA began funding IDFG and the Kootenai Tribe of Idaho (KTOI) to identify environmental factors limiting the white surgeon population in the Kootenai River as part of the Northwest Power Planning Council's Fish and Wildlife Program. IDFG research focused on the status and life history requirements of the sturgeon. KTOI constructed an experimental hatchery to determine the feasibility of artificial propagation of the sturgeon.

In the spring of 1991 IDFG requested the COE to shape flows from Libby Dam for sturgeon research. The COE shaped flows as requested which provided flows of above 35,000 cfs at Bonners Ferry, Idaho for 15 days. A peak flow of 53,000 cfs was recorded on May 19 at Porthill, Idaho. A similar request was made in 1992, but not implemented since it was a poor water year and water was therefore not required to be released for flood control during the sturgeon spawning period.

The Kootenai River white sturgeon was petitioned for listing under the ESA on June 11, 1992, by the Idaho Conservation League, Northern Idaho Audubon and Boundary Backers.

### 3. Sturgeon Technical Committee 1992-1993

On June 16, 1992, the COE, BPA, FWS, IDFG, MDFWP, KTOI, and several other U.S. and Canadian organizations formed the Kootenai River White Sturgeon Technical Committee. The Committee sought to identify factors affecting Kootenai River white sturgeon and develop a regional pre-listing recovery strategy

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[19] Partridge 1983.

[20] Apperson and Anders 1991.

that would form the basis of a conservation agreement between the FWS and various agencies. This group focused on lack of flows as the primary cause of sturgeon decline and did not address the possible impacts of contaminants, loss of habitat and lack of nutrients.

In 1993, the FWS requested flows of 35,000 cfs over a 40-day period with ramp up and ramp down periods. The requested operation extended from mid-April to mid-August. The COE and BPA responded that the FWS request did not fall within the operating constraints of the hydrosystem, but agreed to provide 400,000 acre-feet of water for an experimental flow to be released beginning June 1, 1993. The goal of the experiment was to determine if 20,000 cfs sustained for two weeks at Bonners Ferry would result in sturgeon spawning (presence of eggs/larvae). A total of three eggs were collected. The Committee did not reach a conclusion on a recovery strategy and disbanded in April 1993.

On July 7, 1993, the FWS proposed to list the Kootenai River population of white sturgeon as "endangered" under the ESA.[21] On November 18, 1993, BPA submitted written comments on the proposed rule to the FWS.

**4. Kootenai River Basin Steering Committee 1993-Present**

In October 1993, the Kootenai River White Sturgeon Steering Committee convened to continue white sturgeon discussions following the disbanding of the Committee. The group initially focused on technical issues related to white sturgeon recovery and coordination of BPA funded research activities in the Kootenai River. In February 1994 they expanded to include all research (burbot, nutrient dynamics, etc.) in the Kootenai River basin and changed their name to the Kootenai River Basin Steering Committee. The group facilitates technical discussions, exchanges of information and coordinates research activities in the basin.

**5. Formal Conferencing**

On December 2, 1993, the COE and BPA requested formal

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[21] 58 Fed. Reg. 36379.

conferencing under section 7 of the ESA on the effects of 1994-98 FCRPS operations on the Kootenai River white sturgeon. The FWS issued a formal Conference Opinion on July 27, 1994, concluding that the proposed action was not likely to jeopardize the sturgeon.

The action proposed was in three out of ten years to: 1) maintain 15,000 cfs at Bonner's Ferry in May; 2) increase flows to provide 20,000 cfs at Bonners Ferry for 35 days during the suspected sturgeon spawning period; 3) ramp down and maintain 11,000 cfs for 28 days; and 4) conduct no load-following during May through July in years in which these flows were provided. This action also provides potential benefits to the listed salmon species.

During the 1994 runoff period, BPA and the COE stored 1,200,000 acre-feet of water behind Libby Dam which was shaped and released from May-July to stimulate natural sturgeon spawning. Beginning on May 9, the flow at Bonners Ferry was held above 15,000 cfs, then increased to 20,000 cfs on June 1 and held for 28 days. Flows were ramped down over three days to 12,000 cfs and held stable over the holiday weekend (Fourth of July) at the request of Montana, then further ramped down over five days to 4,000 cfs by July 11. This operation exhausted the 1.2 MAF of water stored for sturgeon.[22] Although the release fell short of the intended operation due to record low incremental flows and concerns for final refill elevations of Lake Koocanusa, a total of 253 eggs and one larvae were collected in the Shorty's Island area. The location of these eggs is significant because, until they were found in 1994, the Shorty's Island area was thought to be only a staging area for the sturgeon. Presence of eggs suggests that spawning may have occurred in prior years in which sturgeon were observed in that area but sampling was not conducted as extensively as in 1994.

### 6. Listing and Consultation

The Kootenai River population of white sturgeon was listed as endangered under the ESA on September 6, 1994.[23] In the final

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[22] Kootenai Tribe at al (1994).
[23] 59 Fed. Reg. 45989.

rule FWS states "that there is no recent evidence of successful spawning and survival past the egg stage" and "existing regulations and experimental flow programs have not been effective in arresting this decline."[24]

Even though sturgeon spawned in 1994, there is no evidence that young sturgeon were recruited to the population. The lack of larvae and fry collected in sampling gear may have been related to time and location of sampling rather than lack of sturgeon in the system.[25] BPA believes that sampling for larval, fry and juvenile sturgeon needs to be done in the lower Kootenai River, the south arm delta area of Kootenay Lake and in Kootenay Lake, B.C. However, sampling in Canada is dependent upon approval from British Columbia. Unfortunately, demonstrating any juvenile recruitment, let alone "significant" recruitment, may require more than one year after any proposed operation. BPA believes that flows are one of the important components affecting sturgeon recruitment. However, the exact magnitude and duration of flow required to produce "significant" recruitment is unknown. Other possible factors affecting sturgeon recruitment include reduced biological productivity, loss of habitat, poor water quality and effects of contaminants. Focus on only one potential limiting factor responsible for recruitment since 1974 should be avoided because it may prevent the development of effective recovery measures. This comprehensive approach should be used to develop research priorities and conservation measures to insure the continued existence of the sturgeon. Future refinement of the technical standard for "significant recruitment will be made by the FWS in coordination with the Kootenai River White Sturgeon Recovery Team.

### 7. FWS Biological Opinion

The 1995 and 1996-98 operations described in the FWS B.O. will come closer to replicating the shape (fluctuating flows) of the natural hydrograph that has been attributed by some with providing favorable conditions not only for spawning but also for larval

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[24] 59 Fed. Reg. 45989.
[25] Biological Assessment.

dispersion, which may increase survival and recruitment. The operations for 1995 coupled with the vastly improved snow pack this year in the watershed below Libby Dam and above Bonners Ferry will provide flows that will, at times, double the volume of water that passed Bonners Ferry in 1994. In addition, the 1995 hydrograph will be very similar to the 1991 hydrograph which is the year in which four out of the eight known post-1974 white sturgeon recruited to the population.

In evaluating the effects of fluctuating flows on this population of sturgeon, BPA took into consideration the following information. As noted above, four of the eight known post-1974 age class sturgeon were spawned in 1991[26] and the remaining four were spawned between 1976 and 1978. Flows during May-July 1991 in Porthill, Idaho ranged from 14,000 cfs to 53,700 cfs and water temperature varied between 9.0° and 20.5° C. In 1977 flows ranged from 4,140 to 24,400 cfs and water temperature varied between 10° and 20.5° C. Flows in 1976 ranged from 8,800 to 44,000 cfs and water temperature varied between 10° and 16° C. Canadian information on white sturgeon below Keenleyside Dam suggests that spawning is enhanced when adequate temperatures are reached on a rising hydrograph.[27] This information suggests that a more natural hydrograph, (pre-1974, 1976-78, and 1991 flows) is adequate for spawning and recruitment of sturgeon in the Kootenai River.

Replicating a more natural hydrograph with releases from Libby Dam will allow a comparison between this operation and the steady flow of 20,000 cfs that was provided in the drought year of 1994. This comparison will provide a wider range of site specific flows in the spawning areas which will allow further data collection and ultimately refined assumptions as to the physical conditions that Kootenai River white sturgeon require for spawning and recruitment. Potential benefits of the 1995 and 1996-98 operations may include: 1) better spawning conditions by

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[26] There is some uncertainty as to whether the fish from the 1991 year class were naturally spawned or spawned in the Kootenai Tribe of Idaho experimental sturgeon hatchery.

[27] Hildebrand 1994.

allowing temperatures to increase with a rising hydrograph; 2) increased survival due to improved egg incubation and larval rearing conditions; 3) dispersal of larval, fry and juveniles downstream to Kootenay Lake and 4) a more natural hydrograph that has been shown to provide recruitment.

## VII. REINITIATION OF CONSULTATION

As provided in the regulations and in the biological opinions, BPA will reinitiate consultation if (a) the amount or extent of taking specified in the incidental take statement is exceeded, (b) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent that was not previously considered, (c) the identified action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in the biological opinion, or (d) a new species is listed or critical habitat designated that may be affected by the identified action.[28]

Issued in Portland, Oregon, on March 10, 1995

/s/

Randall W. Hardy

Administrator and Chief Executive Officer

[28] 50 C.F.R. § 402.16

NOT FOR PUBLICATION
UNITED STATES COURT OF APPEALS
FOR THE NINTH CIRCUIT

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| ALUMINUM COMPANY OF AMERICA, COLUMBIA ALUMINUM CORPORATION, COLUMBIA FALLS ALUMINUM COMPANY, ELF ATOCHEM NORTH AMERICA, INC., INTALCO ALUMINUM CORPORATION, KAISER ALUMINUM & CHEMICAL CORPORATION, NORTHWEST ALUMINUM COMPANY, REYNOLDS METALS COMPANY, and VANALCO, INC., | ) | No. 95-70480 |
| Petitioners, | ) | ORDER DENYING PETITION FOR REHEARING AND FOR REHEARING EN BANC |
| vs. | ) | |
| ADMINISTRATOR, BONNEVILLE POWER ADMINISTRATION, | ) | |
| Respondent. | ) | |

BEFORE: LEAVY, McKEOWN, and WARDLAW, Circuit Judges.

The panel has unanimously voted to deny petitioners' petition for rehearing. The petition for rehearing en banc was circulated to the judges of the court, and no judge requested a vote for en banc consideration.

The petition for rehearing and the petition for rehearing en banc are DENIED.

## STATUTES AND REGULATIONS

### 16 U.S.C. §825s

**Sec. 825s**. Sale of electric power from reservoir projects; rate schedules; preference in sale; construction of transmission lines; disposition of moneys.

Electric power and energy generated at reservoir projects under the ***control*** of the Department of the Army and in the opinion of the Secretary of the Army not required in the operation of such projects shall be delivered to the Secretary of Energy who shall transmit and dispose of such power and energy in such manner as to encourage the most widespread use thereof at the lowest possible rates to consumers consistent with sound business principles, the rate schedules to become effective upon confirmation and approval by the Secretary of Energy. Rate schedules shall be drawn having regard to the recovery (upon the basis of the application of such rate schedules to the capacity of the electric facilities of the projects) of the cost of producing and transmitting such electric energy, including the amortization of the capital investment allocated to power over a reasonable period of years. Preference in the sale of such power and energy shall be given to public bodies and cooperatives. The Secretary of Energy is authorized, from funds to be appropriated by the Congress, to construct or acquire, by purchase or other agreement, only such transmission lines and related facilities as may be necessary in order to make the power and energy generated at said projects available in wholesale quantities for sale on fair and reasonable terms and conditions to facilities owned by the Federal Government, public bodies, cooperatives, and privately owned companies. All moneys received from such sales shall be deposited in the Treasury of the United States as miscellaneous receipts.

### 16 U.S.C. §832a(b)

**Sec. 832a**. General administrative provisions

**(b) Electric transmission lines and equipment**

In order to encourage the widest possible use of all electric

energy that can be generated and marketed and to provide reasonable outlets therefor, and to prevent the monopolization thereof by limited groups, the administrator is authorized and directed to provide, construct, operate, maintain, and improve such electric transmission lines and substations, and facilities and structures appurtenant thereto, as he finds necessary, desirable, or appropriate for the purpose of transmitting electric energy, available for sale, from the Bonneville project to existing and potential markets, and, for the purpose of interchange of electric energy, to interconnect the Bonneville project with other Federal projects and publicly owned power systems constructed on or after August 20, 1937.

**16 U.S.C. §839**

**Sec. 839**. Congressional declaration of purpose

The purposes of this chapter, together with the provisions of other laws applicable to the Federal Columbia River Power System, are all intended to be construed in a consistent manner. Such purposes are also intended to be construed in a manner consistent with applicable environmental laws. Such purposes are:

(1) to encourage, through the unique opportunity provided by the Federal Columbia River Power System –

(A) conservation and efficiency in the use of electric power, and

(B) the development of renewable resources within the Pacific Northwest;

(2) to assure the Pacific Northwest of an adequate, efficient, economical, and reliable power supply;

(3) to provide for the participation and consultation of the Pacific Northwest States, local governments, consumers, customers, users of the Columbia River System (including Federal and State fish and wildlife agencies and appropriate Indian tribes), and the public at large within the region in –

(A) the development of regional plans and programs related to energy conservation, renewable resources, other

resources, and protecting, mitigating and enhancing fish and wildlife resources,

(B) facilitating the orderly planning of the region's power system, and

(C) providing environmental quality;

(4) to provide that the customers of the Bonneville Power Administration and their consumers continue to pay all costs necessary to produce, transmit, and conserve resources to meet the region's electric power requirements, including the amortization on a current basis of the Federal investment in the Federal Columbia River Power System;

(5) to insure, subject to the provisions of this chapter -

(A) that the authorities and responsibilities of State and local governments, electric utility systems, water management agencies, and other non-Federal entities for the regulation, planning, conservation, supply, distribution, and use of electric power shall be construed to be maintained, and

(B) that Congress intends that this chapter not be construed to limit or restrict the ability of customers to take actions in accordance with other applicable provisions of Federal or State law, including, but not limited to, actions to plan, develop, and operate resources and to achieve conservation, without regard to this chapter; and

(6) to protect, mitigate and enhance the fish and wildlife, including related spawning grounds and habitat, of the Columbia River and its tributaries, particularly anadromous fish which are of significant importance to the social and economic well-being of the Pacific Northwest and the Nation and which are dependent on suitable environmental conditions substantially obtainable from the management and operation of the Federal Columbia River Power System and other power generating facilities on the Columbia River and its tributaries.

## 16 U.S.C. §1536(a) & (b)

Sec. 1536. Interagency cooperation

**(a) Federal agency actions and consultations**

(1) The Secretary shall review other programs

administered by him and utilize such programs in furtherance of the purposes of this chapter. All other Federal agencies shall, in consultation with and with the assistance of the Secretary, utilize their authorities in furtherance of the purposes of this chapter by carrying out programs for the conservation of endangered species and threatened species listed pursuant to section 1533 of this title.

(2) Each Federal agency shall, in consultation with and with the assistance of the Secretary, insure that any action authorized, funded, or carried out by such agency (hereinafter in this section referred to as an "agency action") is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of habitat of such species which is determined by the Secretary, after consultation as appropriate with affected States, to be critical, unless such agency has been granted an exemption for such action by the Committee pursuant to subsection (h) of this section. In fulfilling the requirements of this paragraph each agency shall use the best scientific and commercial data available.

(3) Subject to such guidelines as the Secretary may establish, a Federal agency shall consult with the Secretary on any prospective agency action at the request of, and in cooperation with, the prospective permit or license applicant if the applicant has reason to believe that an endangered species or a threatened species may be present in the area affected by his project and that implementation of such action will likely affect such species.

(4) Each Federal agency shall confer with the Secretary on any agency action which is likely to jeopardize the continued existence of any species proposed to be listed under section 1533 of this title or result in the destruction or adverse modification of critical habitat proposed to be designated for such species. This paragraph does not require a limitation on the commitment of resources as described in subsection (d) of this section.

**(b) Opinion of Secretary**

(1)(A) Consultation under subsection (a)(2) of this section with respect to any agency action shall be concluded within the 90-day period beginning on the date on which initiated or, subject to subparagraph (B), within such other period of time as is mutually agreeable to the Secretary and the Federal agency.

(B) In the case of an agency action involving a permit or license applicant, the Secretary and the Federal agency may not mutually agree to conclude consultation within a period exceeding 90 days unless the Secretary, before the close of the 90th day referred to in subparagraph (A) –

(i) if the consultation period proposed to be agreed to will end before the 150th day after the date on which consultation was initiated, submits to the applicant a written statement setting forth –

(I) the reasons why a longer period is required,

(II) the information that is required to complete the consultation, and

(III) the estimated date on which consultation will be completed; or

(ii) if the consultation period proposed to be agreed to will end 150 or more days after the date on which consultation was initiated, obtains the consent of the applicant to such period.

The Secretary and the Federal agency may mutually agree to extend a consultation period established under the preceding sentence if the Secretary, before the close of such period, obtains the consent of the applicant to the extension.

(2) Consultation under subsection (a)(3) of this section shall be concluded within such period as is agreeable to the Secretary, the Federal agency, and the applicant concerned.

(3)(A) Promptly after conclusion of consultation under paragraph (2) or (3) of subsection (a) of this section, the Secretary shall provide to the Federal agency and the applicant, if any, a written statement setting forth the Secretary's opinion, and a summary of the information on which the opinion is based,

detailing how the agency action affects the species or its critical habitat. If jeopardy or adverse modification is found, the Secretary shall suggest those reasonable and prudent alternatives which he believes would not violate subsection (a)(2) of this section and can be taken by the Federal agency or applicant in implementing the agency action.

(B) Consultation under subsection (a)(3) of this section, and an opinion issued by the Secretary incident to such consultation, regarding an agency action shall be treated respectively as a consultation under subsection (a)(2) of this section, and as an opinion issued after consultation under such subsection, regarding that action if the Secretary reviews the action before it is commenced by the Federal agency and finds, and notifies such agency, that no significant changes have been made with respect to the action and that no significant change has occurred regarding the information used during the initial consultation.

(4) If after consultation under subsection (a)(2) of this section, the Secretary concludes that –

(A) the agency action will not violate such subsection, or offers reasonable and prudent alternatives which the Secretary believes would not violate such subsection;

(B) the taking of an endangered species or a threatened species incidental to the agency action will not violate such subsection; and

(C) if an endangered species or threatened species of a marine mammal is involved, the taking is authorized pursuant to section 1371(a)(5) of this title;

the Secretary shall provide the Federal agency and the applicant concerned, if any, with a written statement that –

(i) specifies the impact of such incidental taking on the species,

(ii) specifies those reasonable and prudent measures that the Secretary considers necessary or appropriate to minimize such impact,

(iii) in the case of marine mammals, specifies those measures that are necessary to comply with section

1371(a)(5) of this title with regard to such taking, and

(iv) sets forth the terms and conditions (including, but not limited to, reporting requirements) that must be complied with by the Federal agency or applicant (if any), or both, to implement the measures specified under clauses (ii) and (iii).

**50 CFR §402.02**

**Sec. 402.02.** Definitions.

***Effects of the action*** refers to the direct and indirect effects of an action on the species or critical habitat, together with the effects of other activities that are interrelated or interdependent with that action, that will be added to the environmental baseline. The environmental baseline includes the past and present impacts of all Federal, State, or private actions and other human activities in the action area, the anticipated impacts of all proposed Federal projects in the action area that have already undergone formal or early section 7 consultation, and the impact of State or private actions which are contemporaneous with the consultation in process. Indirect effects are those that are caused by the proposed action and are later in time, but still are reasonably certain to occur. Interrelated actions are those that are part of a larger action and depend on the larger action for their justification. Interdependent actions are those that have no independent utility apart from the action under consideration.

***Jeopardize the continued existence of*** means to engage in an action that reasonably would be expected, directly or indirectly, to reduce appreciably the likelihood of both the survival and recovery of a listed species in the wild by reducing the reproduction, numbers, or distribution of that species.